HANDBOOK

FOR THE DEVELOPMENT OF ARTICLE 6 PROJECTS IN THE BUILDINGS SECTOR

PEEB
PARTNERSHIP FOR ENERGY EFFICIENCY IN BUILDINGS

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About PEEB Climate Finance Incubator
PEEB Climate Finance Incubator (CFI) is a programme under the umbrella of the Partnership for Energy Efficiency in Buildings (PEEB) that lays the foundation for climate finance through support for a clear data baseline on greenhouse gas emissions from buildings, pioneering work on Article 6 mechanisms for buildings, and innovative incentive mechanisms that mobilise private investments.

For more information, please visit https://peeb.build/peeb-climate-finance/.

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TABLE OF CONTENTS

GLOSSARY

A6.4 Ers	Article 6.4 Emission Reductions
ACM	Approved Consolidated Methodology
AM	Approved Methodology
AMS	Approved Methodology for Small-scale projects
BAU	Business as Usual
CA	Corresponding Adjustment
CCU	Carbon Capture and Utilisation
CDM	Clean Development Mechanism
CFI	Climate Finance Incubator
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
DNA	Designated National Authority
DSM	Demand-Side Management
EDGE	Excellence in Design for Greater Efficiencies
EPC	Energy Performance Contract
ESCO	Energy Service Company
ESG	Environmental, social, and governance
GCF	Green Climate Fund
GHG	Greenhouse Gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
GS	Gold Standard
GWP	Global Warming Potential
HVAC	Heating, Ventilation, and Air Conditioning
ICAO	International Civil Aviation Organisation
IoT	Internet of Things
IPCC	Intergovernmental Panel on Climate Change
IRR	Internal Rate of Return
ITMO	Internationally Transferred Mitigation Outcomes
JCM	Joint Crediting Mechanism
LCA	Life Cycle Assessment
LED	Light-Emitting Diode
LEED	Leadership in Energy and Environmental Design
MRV	Monitoring, Reporting and Verification
MTECT	French Ministry of Ecological Transition and Territorial Cohesion
NDC	Nationally Determined Contribution
NPV	Net Present Value
ODP	Ozone Depletion Potential
PBAs	Policy-Based Activities
PBP	Policy-Based Programme
PEEB	Partnership for Energy Efficiency in Buildings
PoA	Programme of Activities
RAC	Refrigeration and Air Conditioning
REDD+	Reducing Emissions from Deforestation and Forest Degradation
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
VCM	Voluntary Carbon Market
VCS	Verified Carbon Standard (by Verra)

The Big Question Marks

What is Article 6 of the Paris Agreement?

It's an international framework that allows countries to cooperate on cutting greenhouse gas emissions. For example, by trading verified emission reductions between nations through carbon markets.

What role do buildings play in carbon markets such as Article 6?

So far, not a major one. Buildings have barely engaged with carbon markets. Yet they account for a large share of global emissions, and there is huge potential to cut these through better design and low-carbon materials. In other words: Article 6 could be a game changer for the buildings sector.

Why has the buildings sector stayed on the sidelines of carbon markets?

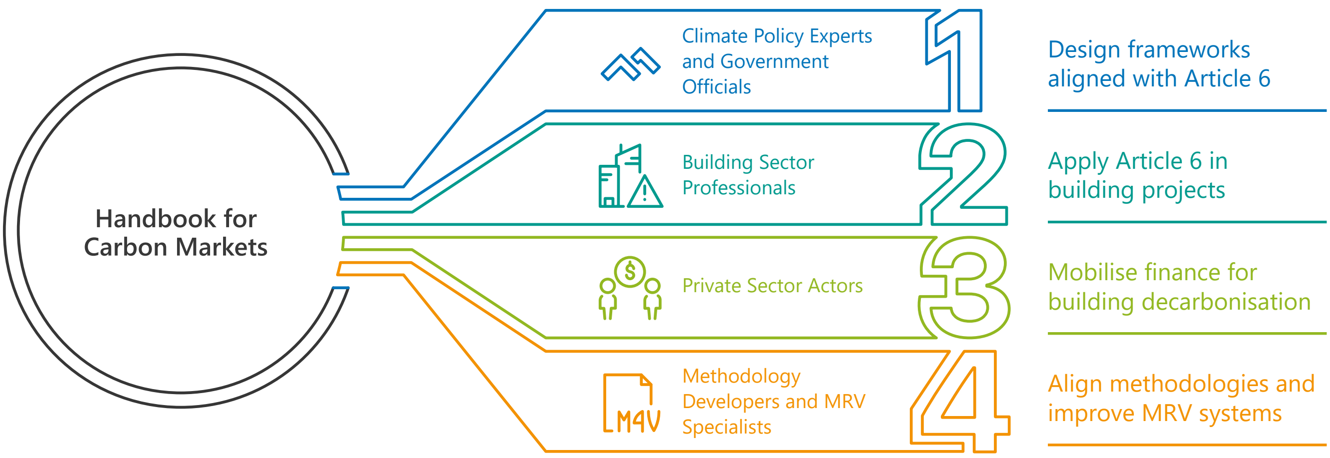
Until now, it has been hard to fund and track projects because improvements often happen on a small, scattered scale. And: The rules and procedures under Article 6 can be complex. Many decision-makers and project developers are unsure where to begin.

Why was this Handbook created?

It aims to change the way buildings sector actors and policymakers engage with Article 6 mechanisms. How? It offers clear, practical guidance – from understanding the basics to identifying project opportunities and navigating approval processes – so that more actors can confidently tap into the emerging Article 6 framework to unlock investment.

Who is this Handbook for?

For practitioners and decision-makers in the buildings sector who want to explore opportunities in the carbon markets under Article 6.

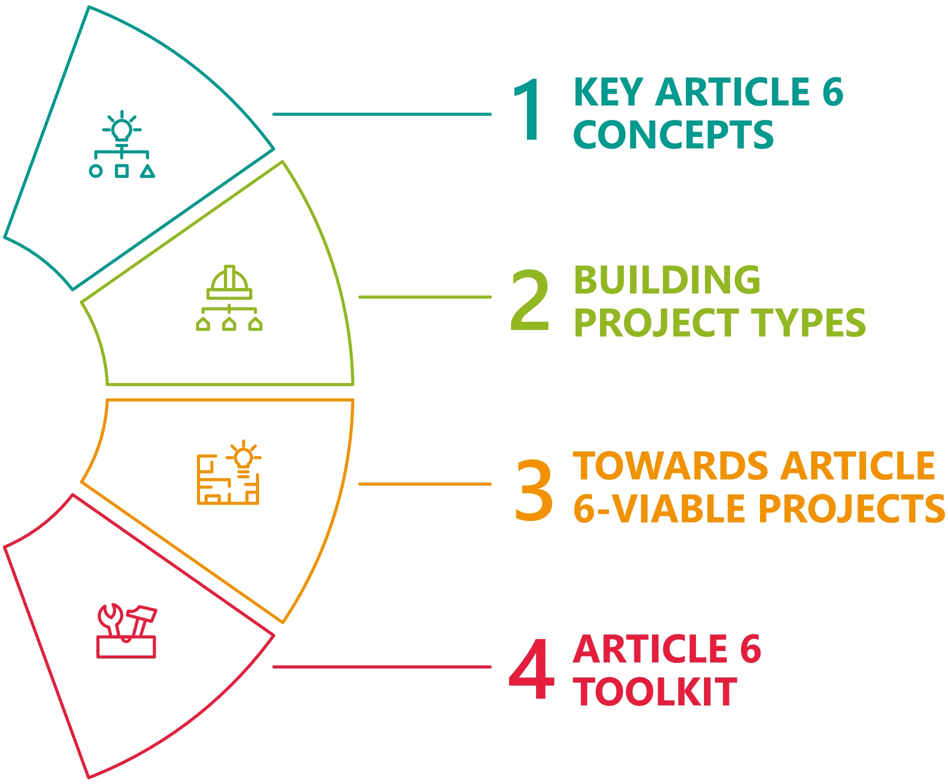


How does this Handbook link to PEEB's White Paper on Article 6?

This Handbook builds on the contents and strategic recommendations from the White Paper on Methodologies and viability for Article 6 projects in the buildings sector. While the White Paper offers an in-depth analysis of methodologies and their applicability, this Handbook translates the technical White Paper insights into more practical guidance for sectoral stakeholders. You may think of the White Paper as the "what and why" and this Handbook as the "how," providing the practical tools for the timely and effective conception, design, and institutional approval of Article 6 projects in the buildings sector.

What can you expect from this Handbook?

- **Chapter 1** provides an overview of the core concepts and principles of carbon markets and Article 6 to equip Handbook users with the foundational knowledge required for effective engagement with Article 6.
- **Chapter 2** outlines a typology of potential Article 6 projects in the buildings sector that can be used to assess the viability of different types of projects and link them to the relevant approved methodologies. A selection of real-world case studies is provided, too.
- **Chapter 3** offers a detailed, seven-step guide that walks practitioners through the entire Article 6 project development process, from initial concept and design stage through to implementation, reporting, and the final submission of documentation for registry approval and listing.
- **Chapter 4** sets out the various tools and resources available to support project development, including simplified methodologies and online platforms for further learning.



1 | Key Article 6 Concepts

WHAT ARE CARBON MARKETS?

Carbon markets allow the trading of emission units, measured in metric tonnes of CO_2-equivalent. In the carbon credit market, implemented projects can generate and sell the resulting emission reductions as *carbon credits*. Under the Kyoto Protocol's Clean Development Mechanism (CDM), projects in developing countries could generate certified emission reductions (CERs), which developed countries (or other parties) could purchase to meet their emission reduction targets. Its successors, the Article 6 mechanisms of the Paris Agreement, apply the same principle, with all countries being able to host projects and/or buy emission reduction units. Similar programmes also exist for voluntary emission reduction efforts and targets at the national and international levels. A carbon credit typically represents one tonne of CO_2 (or its equivalent) that has not been emitted or has been removed from the atmosphere and is verified under a recognised standard.

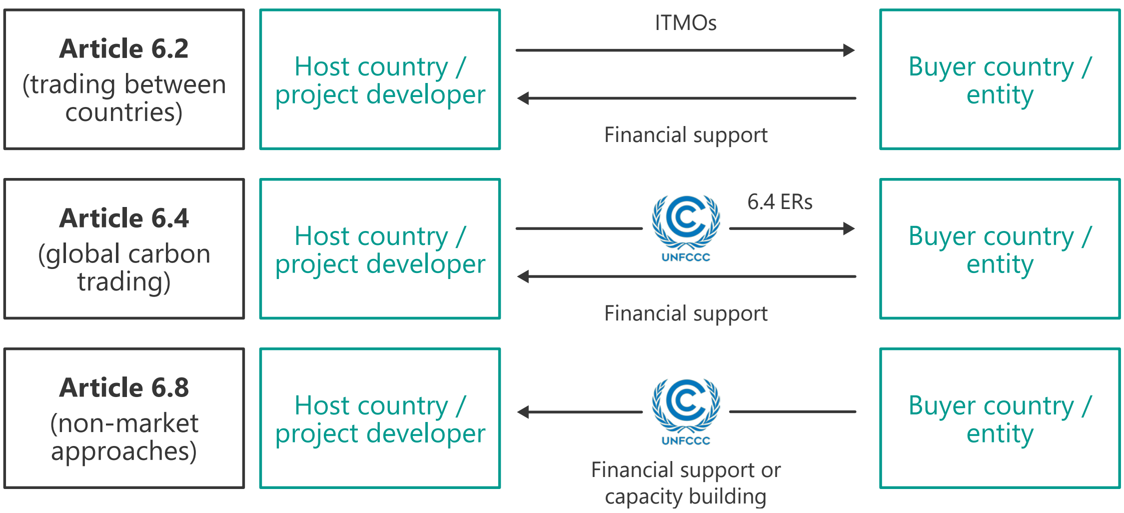
The Paris Agreement's Article 6 allows all countries, not just developed ones, to trade carbon credits through two approaches[2]:

i. **Article 6.2** – cooperative approaches through bilateral or multilateral agreements. Countries agree directly on how to international transfer of mitigation outcomes (ITMOs), with flexibility in methods and governance, provided they adhere to transparency and accounting rules.

   For example, Japan or Switzerland can partner with a host country (like Thailand or Ghana) on a specific project or programme, decide the rules together, and then report the transfers for UN transparency. This approach is already in place, as evidenced by the fact that several countries, such as Switzerland, have signed bilateral agreements, and pilot projects are ongoing.

ii. **Article 6.4** – a UNFCCC-managed crediting mechanism (the successor to the CDM) with a centralised Supervisory Body. It will issue Article 6.4 Emission Reductions (A6.4ERs) that countries or other entities can buy.

FIGURE 1



Source: Own creation, based on graphic by Zero Carbon Analytics

2 A third approach is defined in Article 6.8 of the Paris Agreement, focusing on non-market-based approaches.

THE CARBON MARKETS ABC

Carbon markets are not always easy to grasp – the rules, mechanisms, and terminology can feel complex. This section explains their key components, spanning both compliance and voluntary crediting systems. It traces the evolution from the early Clean Development Mechanism (CDM) to today's fast-growing Voluntary Carbon Market (VCM) and the new Paris Agreement Article 6 (PA6) framework.

A

Additionality

Additionality is a fundamental principle carried over from the CDM (see explanation under C) to Article 6 to ensure that project activities result in actual, additional emission reductions. It addresses the question: *Would the project have occurred without carbon credit revenue?*[3] A project is considered *additional* if the answer is "no," meaning the project's emission reductions go beyond any usual business scenario. In practice, demonstrating additionality often involves showing that a project would not be financially viable without the income from carbon credits or would face other implementation barriers.

BOX 1 Additionality in PA6

An Article 6.4 activity is additional if:

i. It represents mitigation that exceeds any mitigation that is required by law or regulation.
ii. It avoids locking in levels of emissions, technologies, or carbon-intensive practices that are incompatible with paragraph 33 of the rules, modalities, and procedures of the Article 6.4 mechanism; and
iii. It would not have occurred in the absence of the incentives from the mechanism, taking into account all relevant national policies, including legislation.

Additionality test hierarchy

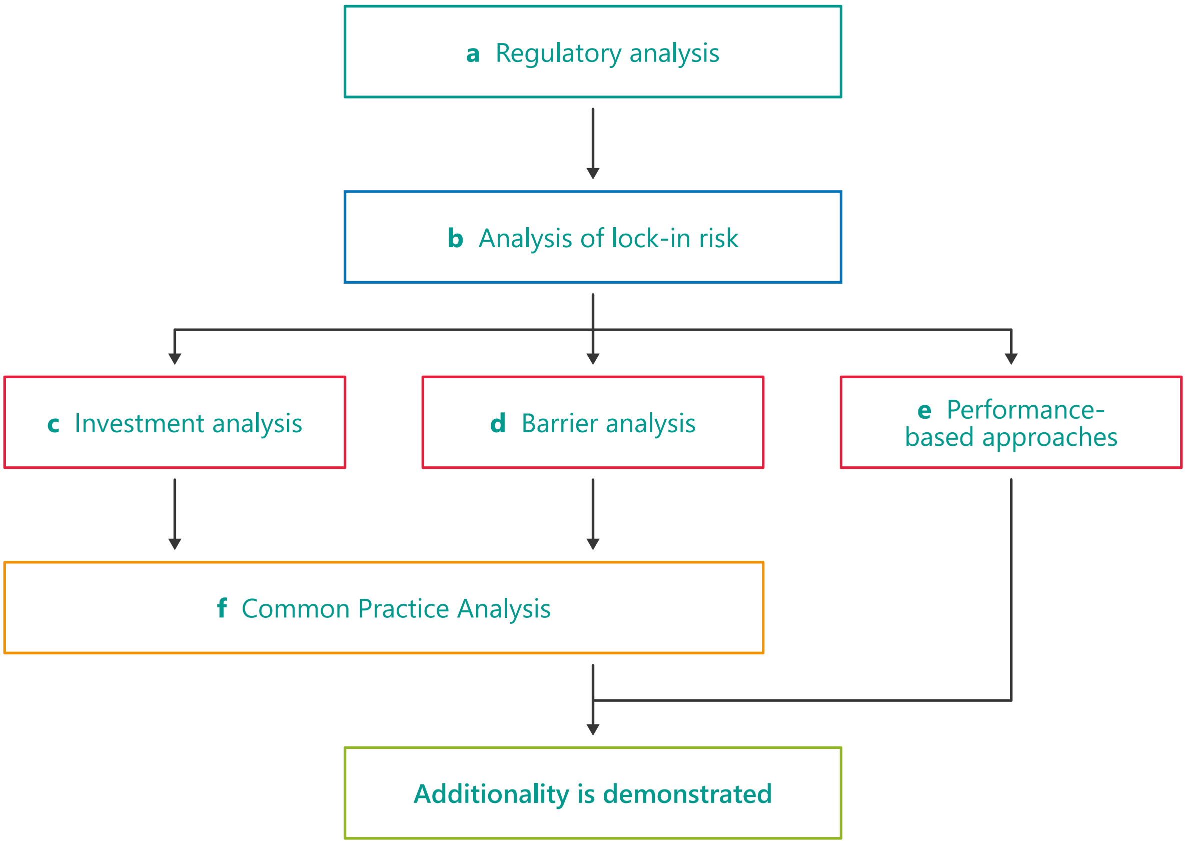
- (a) Regulatory analysis + (b) Analysis of lock-in have to be used in all methodologies
- (c) The investment analysis shall be used as the default approach
- If (c) is not feasible or appropriate:
  - This needs to be justified
  - Information on the financial viability of the proposed Art. 6.4 activity should still be provided
  - Then (d) barrier analysis may be used (under certain conditions)
- The use of (c) or (d) must be complemented by (e) a common practice analysis
- Under certain conditions, performance-based approaches may be used as an alternative to (c), (d), and (e), when duly justified.

3 Wade-Murphy, J., Kanda, S., Gadde, H., Kim, S., & Sinha, C. S. (2023). Considerations for additionality concepts to Article 6.2 approaches. In The World Bank. World Bank Working Paper. ***https://documents1.worldbank.org/curated/en/099081924021032351/pdf/P176991-a2dc485d-896c-405d-a737-2a4da222e34d.pdf***

Installing costly high-efficiency chillers may only happen if carbon credit revenue helps cover the extra cost. But if the owner would have installed them anyway for energy savings, the project fails the additionality test because the emission reductions are not truly extra.

However, additionality is not just about whether project revenues are needed to overcome financial barriers. It can also refer to whether measures implemented in the project are required by law (regulatory additionality) or can be expected to be common practice given existing policies or market conditions. Existing barriers can result in a project being additional, e.g., when existing regulatory standards are commonly not complied with because of technical or organisational barriers.

FIGURE 2



B

Baseline scenario

The baseline is the reference emission against which the project's emission reductions are calculated. It represents the situation when the project is not in place. It answers: *"What would emissions be if we did nothing beyond the usual practice?"* For a new building project, the baseline could be based on the energy use and emissions of a typical building of similar size and purpose, or the continued use of outdated, inefficient technology for existing buildings.

BOX 2 Example baseline scenario

If an office is being upgraded to LED lighting, the baseline might be the ongoing use of older fluorescent lamps during the project's crediting period. Baselines must be based on reliable data and methods to prevent over-crediting. Many approaches give specific guidance, such as using historical energy consumption or a regional average as the baseline.[4]

C

Certified emission reduction

After project implementation, emission reductions are calculated each year by subtracting the project's verified emissions from the baseline emission level. After certification by an independent third party, the certified emission reduction units can then be issued and used or sold.

Corresponding adjustment

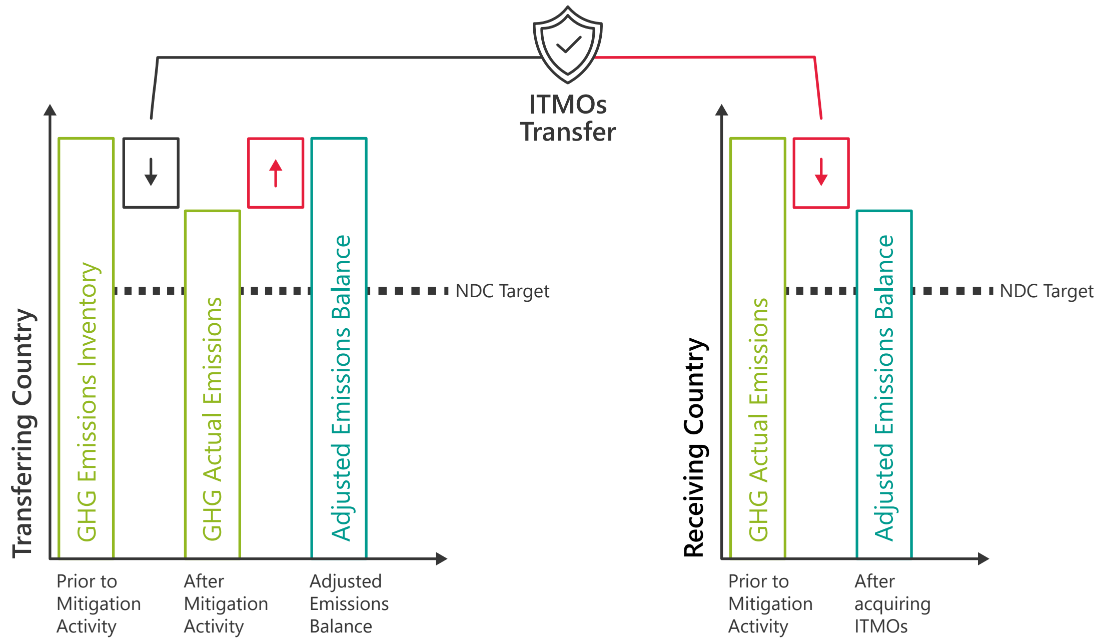
A corresponding adjustment is a new concept under Article 6 of the Paris Agreement. Its purpose is to prevent double-counting of emission reductions between countries. Under the Paris Agreement's framework, all parties have to submit Nationally Determined Contributions (NDCs), containing their national emission reduction targets. It must be avoided that the same emission reduction units[5] would be used to meet the national emission target in the host (selling) country and in the buying country. This would lead to an increase in emissions. To do so, both countries must reflect the transfer of the emission reduction units in their national emissions inventories.

In practice, the host party/country (seller) adds the amount of emission units sold to the emissions that actually occur after the project's implementation to its own emissions inventory, as if those emissions still occurred nationally. This increased emission level is then compared to the host country's national emission target to assess compliance. At the same time, the buying country deducts that transferred amount from the actual emissions in its national inventory. This reduced level is compared to the buying country's national emission target for compliance. This ensures that the same emission reduction is used only once – towards the buyer's NDC target.

4 Michaelowa, A., Ahonen, H.-M., Espelage, A., & Perspectives Climate Research gGmbH. (2021). Setting crediting baselines under Article 6 of the Paris Agreement. In Perspectives Climate Research gGmbH [Discussion Paper]. Perspectives Climate Research gGmbH. ***https://www.carbon-mechanisms.de/fileadmin/media/dokumente/Publikationen/Policy_Paper/Setting_crediting_baselines_under_Article6.pdf***

5 Generically referred to as International Mitigation Outcomes (ITMOs), which can refer to emission reduction credits or other emission units.

FIGURE 3



Source: Own creation based on UNFCCC graphic presented in training on Article 6 (16 October 2024)

CREDITING CYCLE: KEY STEPS OF A CREDITING PROJECT AND GOVERNANCE STRUCTURE

The process of developing and implementing Article 6.4 projects[6] follows a clear cycle with a defined governance structure. The crediting cycle for Article 6.4 projects involves some sequential steps, from defining project ideas and their alignment with the NDCs' priorities to defining system boundaries, establishing baselines, demonstrating additionality, and designing MRV plans. After the validation, the project must be approved and registered. After implementation, emissions must be monitored, reported, and verified, and the emission reductions calculated and certified. The final steps are the issuance and transfer of credits, with the corresponding adjustments in the selling and buying countries' national emission inventories.

The pre-registration part of this process includes the following key steps, starting with what is commonly referred to as a Project Idea Note (PIN)[7].

6 Countries involved in Article 6.2 projects may also choose to follow this procedure, but they are not required to.
7 United Nations Framework Convention on Climate Change. (n.d.). *Paris Agreement Crediting Mechanism*. UNFCCC. Retrieved August 29, 2025, from ***https://unfccc.int/process-and-meetings/the-paris-agreement/article-64-mechanism***

Key registration steps:

Step 1 — **Align with NDC:** Check alignment with the host country's NDC and Article 6 rules. Confirm eligibility, sustainable development benefits, and carbon market participation.

Step 2 — **Define intervention/project scopes:** Clearly define the project activity, technology, and location. Specify included emission sources.

Step 3 — **Determine most likely baseline scenario:** Select the most suitable approved methodology for emission reductions. Define and justify the most likely baseline scenario conservatively and system boundaries.

Step 4 — **Determine additionality:** Demonstrate financial, technological, or barrier-based additionality.

Step 5 — **Design the MRV plan:** Develop a monitoring system with clear data collection, responsibilities, and quality control. Address leakage risks and plan for verification.

Step 6 — **Engagement with the national and international approval processes:** Complete stakeholder consultations. Submit project documentation (include project participants) to the host country authority. Secure a Letter of Authorization. Finalise the Project Design Document and undergo validation if required. Submit to the relevant registry and plan for verification and credit issuance.

Once these six steps focused on project design and the approval phase have been completed, the post-registration phase should begin. This phase covers monitoring, verification, certification, and credit issuance.

Governance structure

The UNFCCC Conference of the Parties decides on the framework for Article 6. For Article 6.4, the detailed rules and procedures for the project cycle are overseen by the Article 6.4 Supervisory Body with Designated National Authorities (DNAs) and independent auditors (DOEs), working together to ensure that projects are transparent and contribute to maintaining environmental integrity.

For Article 6.2, the general UNFCCC framework also applies, but detailed rules and procedures are agreed by the countries involved in the transaction.

FIGURE 4

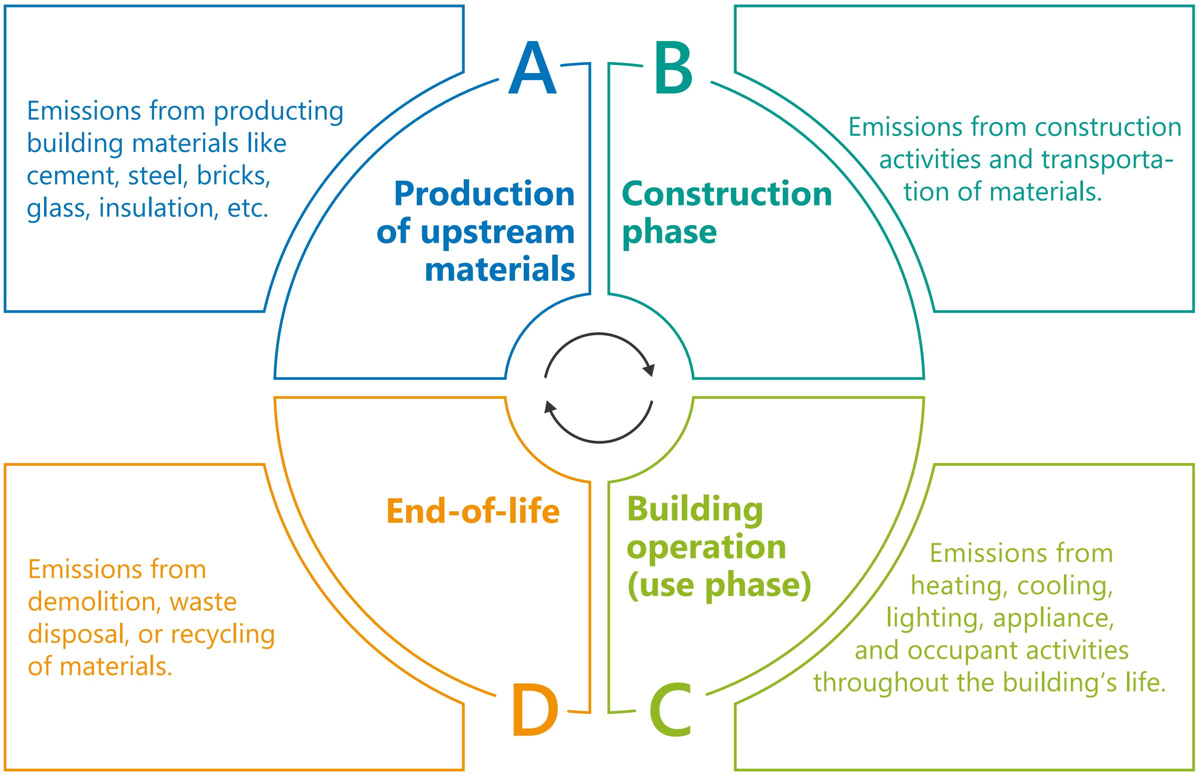
	Governance Structure	Role	Key Responsibilities	Importance
1	**UNFCCC Framework:** Establishes the overarching framework and rules	Ultimate rulemaker	Sets principles, rules, and procedures	Decisions change eligibility, reporting
2	**Article 6.4. Supervisory Body (SB):** Oversees the Paris Agreement Crediting Mechanism (PACM) and approves	Oversees centralised carbon market	Approves methodologies or standards, accredits verifiers, and registry project activities	Methodology approval impacts projects qualification
3	**Designated National Authorities (DNAs):** National entities approve and manage projects	National government decision maker	Project approval at different stages, strategic oversight, and authorieses transfers	Priorities determine project approval
4	**Designated Operational Entities (DOEs):** Independent auditors validate projects, verify emissions, and certify emission reductions	Independent thrid-party auditors	Validation, verification, and certification	Positive opinion required for projects approval and issuance of credits

BUILDINGS-SPECIFIC CONCEPTS

The buildings sector refers to a building's entire value chain, encompassing everything from the production stage of materials to the end of their useful life. This sector is relevant to achieving climate goals due to its contribution to GHG emissions from energy use throughout the value chain. Projects under Article 6 must specify the stages considered to avoid emissions displacement.

Building value chain (lifecycle stages): The environmental impact of buildings occurs across the entire value chain during a *building's lifecycle*. This includes:

FIGURE 5



Globally, a significant portion of building-related emissions originates from operational energy use (often categorised as Scope 1 and Scope 2 emissions, which include on-site and electricity-related emissions respectively), and approximately 18% of global emissions stem from embodied emissions in materials (Scope 3).[8]

Split incentives: also known as the "principal-agent problem". This occurs when the benefits of an investment are not distributed fairly. The people who make decisions and those who benefit are not the same. As a result, investments may not be sufficient to achieve energy savings.

8 **Explanatory Note:** Scope 1 emissions: Direct emissions from owned or controlled sources (e.g., on-site fuel combustion). Scope 2 emissions: Indirect emissions from purchased electricity, heat, or steam. Scope 3 emissions: All other indirect emissions across the value chain (e.g., embodied carbon in materials).

Some examples of carbon financing related to split incentives are:

Landlord-Tenant Dynamics: Owners of residential or commercial buildings pay for energy efficiency improvements, such as installing heating, ventilation, and air conditioning systems to reduce energy consumption. However, it is the tenants who benefit from these savings on their utility bills, which often means that owners are not interested in making these improvements.

Financing Energy Efficiency Improvements: Carbon credits or other financial support are used to pay for energy efficiency improvements, and the benefit is divided between the lender and the building owner. However, owners may lose interest in implementing energy efficiency measures if the financial benefits are not immediate and if they plan to sell the building.

Energy Performance Contracts (EPCs): EPCs are a common way to reduce energy consumption, as the promised financial savings are attractive to customers. However, if the savings are not shared equally between the Energy Service Company (ESCO) and the client (e.g., a building owner), the latter is unlikely to want to invest. For instance, a school contracts an ESCO to identify and implement energy efficiency measures, but in the end, the customer secures no savings, and the benefits are received by the utility company or the ESCO; consequently, the customer may lose interest.

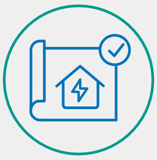
Carbon Credit Trading: Companies have the option of making direct changes to reduce their pollutant emissions, or they can purchase carbon credits from other companies that are already doing so. For instance, a factory decides to buy carbon credits from a renewable energy project instead of implementing energy-saving measures in its processes. Although this strategy represents a smaller investment for the company, it would not advance carbon emissions reduction.

Utility Programmes: Utilities companies offer programmes to encourage users to consume less energy, like discounts on efficient appliances. However, this may not always apply, such as in cases where the owner pays for the appliances, but the tenant uses them and benefits from the savings on electricity bills. As a result, the owner may lose interest in investing.

Public-Private Partnerships (PPPs): Local governments invest in improving the energy efficiency of public buildings to reduce carbon emissions with the support of private companies. Energy savings benefit both the public agency and the private partner participating in the project. However, private companies may not collaborate on a project if they do not obtain a direct profit from the reduction in operating costs.

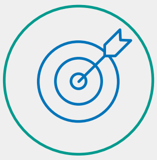
BOX 3 Performance-based vs technology-based

There are two different methods for establishing energy efficiency standards or codes in buildings. This applies not only to buildings, but also to industrial energy efficiency in emission standards for products or technologies. These standards also influence how projects seeking carbon credits in construction projects are designed.



Technology-based indicates the minimum energy efficiency requirements that a building must meet. For example, the prescriptive standard establishes that buildings must have walls with at least R-20 insulation, windows must be double-glazed with a specific U-value, and solar panels must be installed to provide a minimum portion of the building's annual electricity demand.

To verify the application of this method, it is necessary to check that the elements required by the standard were installed or used.[9] However, it does not allow for the implementation of other equally or more efficient solutions outside the checklist, nor does it consider the overall building performance. In carbon credit terms, this method defines a baseline based on typical building technologies and materials. The credits are obtained for using devices that are more efficient than the average requirement.



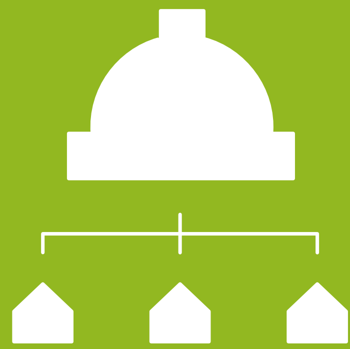
Performance-based standards set objectives or goals, rather than imposing how to achieve them. In building codes, these standards specify an *energy performance level* or *emissions reduction target* that a building must meet. Architects or designers are free to choose the approach.

For example, a performance-based standard might specify that a new building shall consume no more than 100 kWh/m² per year of primary energy. The target is achieved by using better thermal insulation, more efficient equipment, solar panels, or a combination of different solutions. Ultimately, the building will consume less than or equal to the target and will have a good overall energy performance.[10]

This approach enables the use of innovative technologies to achieve the target. For example, a building with thermal insulation problems can install a more efficient HVAC system to reduce energy consumption to the established limit. However, it requires a technical analysis with simulations of energy consumption behaviour to demonstrate compliance with the target.

9 Energy Codes and Standards | WBDG - Whole Building Design Guide. (n.d.). ***https://www.wbdg.org/resources/energy-codes-and-standards***

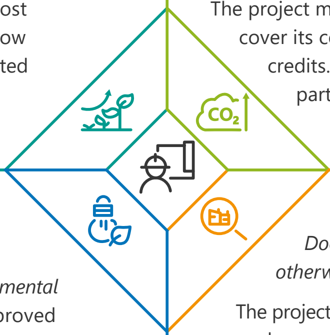
10 Ibid.



2 Building Project Types

To check whether a building sector project is viable under Article 6, it is important to follow clear assessment guidelines. **Viability** will demonstrate that the project can participate in the international cooperation mechanisms established by Article 6.4. To carry out the assessment, **four key dimensions** are analysed:

FIGURE 6



1. Economic viability

Are emission reductions achieved at a reasonable cost?

The project must be financially sustainable, i.e., it must cover its costs and be profitable using revenue from carbon credits. This also includes additional transaction costs for participating in Article 6.

2. Additionality

Does the project lead to emission reductions that would otherwise not take place?

The project must demonstrate that the environmental benefits are real, measurable, and long-lasting, and that they would not have occurred without the help of Article 6. The project should also show that it is not sufficiently financially attractive without carbon revenue, but becomes viable with it. It must also avoid unintended effects, such as shifting the problem elsewhere or creating negative incentives.

3. MRV

Can emission reductions be tracked transparently?

Strong MRV is considered "*pivotal to ensure environmental integrity*" in carbon markets. Together with an approved baseline, this results in a robust calculation of the project's emission reductions, which are subsequently certified.[11]

Monitoring: Regularly measuring data in the whole value chain.

Reporting: Recording the data and clearly showing how emissions reduction.

Verification: An independent entity reviews the data and confirms that everything is correctly calculated and reported according to the project plan.

4. Scalability

Can the project deliver scalable and replicable mitigation outcomes?

Energy efficiency projects in buildings are often most effective when they are broad in scope and can grow over time. In other words, they can be easily replicated in other locations or scaled up to reduce more greenhouse gas emissions.

These factors help to ensure that the project is possible to implement and contributes to reducing emissions, in line with UNFCCC and host country goals.

11 UNFCCC International Initiative for Development of Article 6 Methodology Tools, (11.10.2022) Paris Agreement – Article 6. Tool for monitoring, reporting and verification of emissions, reductions and removals, ***https://unfccc.int/sites/default/files/resource/SB002-call-for-input-5.3-MRV-Tool.pdf***

Key Dimensions	What to consider	Strategies to ensure project viability
1. Economic viability	• Article 6 revenue is a necessary condition for the viability and feasibility of the project. • High transaction costs or small-scale interventions risk undermining cost-effectiveness.	a) Conduct an investment analysis comparing the project with and without carbon revenues to demonstrate how income from carbon credits makes the project profitable. b) Group several small projects into a single programme to reduce costs per unit. c) Prioritise proven technologies with good potential for return on investment. d) Create a phased design that allows you to start small and grow over time, reducing initial risks.
2. Additionality	• Developers must demonstrate that emission reductions would not happen without Article 6 support. • Developers must demonstrate that the intervention results in emissions below the baseline.	a) Check whether the host country government has not excluded the proposed project type from eligibility for Article 6, e.g., because of the intended use for compliance with its own emission reduction targets. b) Check what is required by existing (or planned) relevant legislation in terms of the planned project activity, e.g., minimum implementation rates or performance standards, technology bans or obligations, etc. c) Focus on actions that currently face economic, technical, institutional, or behavioural/cultural barriers, e.g., preferences for certain building styles, comfort levels, or other user habits. d) Conduct a financial analysis with and without carbon revenues. Show that carbon finance is decisive. e) Gather evidence on what is already common practice in the local market to show that the proposed solution is not yet common. f) Use recognised tests of additionality (such as investment or barrier analysis). g) Clearly show how carbon credit revenues make the project viable, e.g., by improving its profitability, and ensure that this is supported by a credible baseline assessment that defines the expected emission reductions compared with the without-project scenario.

3. MRV	• MRV systems must ensure that emissions are measurable and verifiable so that emission reductions can be determined accurately and transparently. • Weak MRV undermines credibility and market acceptance.	a) Choose types of projects where results are easy to monitor (e.g., equipment replacement or solar panel installation). b) Include practical and affordable monitoring tools, such as energy meters or standardised surveys. c) Define from the outset who will be responsible for collecting, storing, and reporting data. d) Use indicators that can be independently reviewed by third parties.
4. Scalability	• Article 6 favours projects that generate significant, replicable, and long-term emission reductions. • Small individual projects often struggle to justify costs.	a) Choose solutions that can be applied in many buildings (such as switching to LED lighting, improving insulation, or installing solar panels). b) Design with scalability in mind, for example, at the city or sector level, rather than a single building. c) Consider options to bundle single-site interventions into a programme of activities[12], policy-based approaches, and/or use simplified methodologies for baseline setting and MRV. d) Highlight additional benefits of the project, such as job creation, improved health, or access to energy. e) Plan a clear path from pilot projects to larger programmes at the national or regional level.

MAPPING OF PROJECT TYPE VIABILITY

The most promising project types in the buildings sector are shown based on earlier experience in carbon crediting markets and the current status of Article 6 rules (as of July 2025). Each project type is classified as having a high, medium, or low viability according to two key criteria: its expected contribution to GHG emission reductions and the ability to demonstrate that such reduction actually occurred. The classification considers all stages of a building's value chain from the *production of materials, construction*, and *use*, to the *end-of-life* stage. This provides an overview of avoiding emissions leakage and supports holistic mitigation.

12 A Programme of Activities (PoA) can record the coordinated implementation of a policy, measure, or objective to reduce emissions. When registering, an unlimited number of component project activities (CPAs) can be added without going through the full CDM project cycle.

Production stage

Projects in the Production stage target upstream emissions from manufacturing building materials, which account for a substantial portion of embodied carbon in buildings.

Project type	Description	GHG reduction potential	MRV feasibility
Reducing emissions from energy use in material production	These projects reduce emissions by improving energy efficiency, switching from fossil fuels to low-carbon or renewable sources, and electrifying production processes.	High	High
Production of new low-carbon materials	They focus on developing and promoting materials with a lower carbon footprint compared to conventional options. Some examples are alternative binders, advanced composites, bio-based materials such as timber, hempcrete, and bamboo.	High	Medium
Reduction of process emissions	Projects focus on emissions released directly by chemical or industrial processes. Key measures include clinker substitution, lime production, and aluminium perfluorocarbons (PFCs).	Medium	Medium

Construction stage

These projects focus on on-site practices and material choices during building assembly, aiming to minimise waste and energy use in construction activities.

Project type	Description	GHG reduction potential	MRV feasibility
Efficient construction equipment	Deployment of electric or hybrid machinery (e.g., cranes, excavators) to replace diesel-powered equipment, cutting fuel-related emissions.	Medium	High
Fuel switch/ electrification of construction equipment	Replace fossil-fuel-powered machinery with equipment that uses low-carbon fuels (biofuels and hydrogen) or electricity.	Medium	High

Use stage

The use stage presents the greatest opportunities for ongoing emissions reductions, focusing on operational energy efficiency and occupant behaviour in occupied buildings. Note that while some of the projects mentioned result in reduced emissions from the building's use, the project needs to be implemented during the construction of the buildings (for new building projects), such as the choice of building materials and the building design.

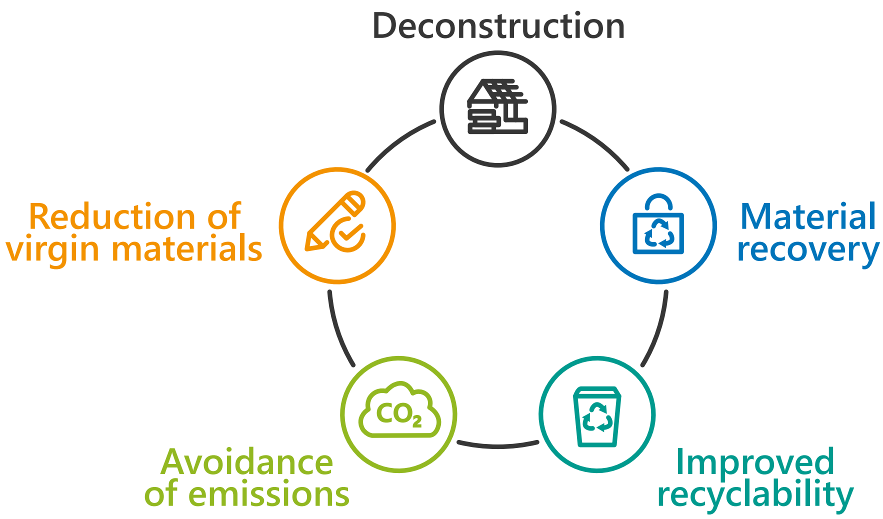
Project type	Description	GHG reduction potential	MRV feasibility
Commercial/ public building retrofits	Comprehensive upgrades to envelopes, HVAC systems, and lighting in existing buildings to reduce energy consumption.	High	High
Heat pump installation (new/existing)	Development of efficient, low-carbon district systems using waste heat or renewables to serve multiple buildings.	High	High
Building-integrated appliances	Improve the energy performance of appliances integrated into buildings, e.g. boilers and HVAC.	High	High
New low-carbon building	Promote the construction of energy-efficient buildings that incorporate passive design, insulation, and orientation.	High	High
Efficient lighting replacement	Replace conventional lighting systems with high-efficiency technologies.	Medium	High
Residential whole-building retrofits	Involve upgrades to existing homes to enhance energy efficiency, such as improving insulation, upgrading HVAC systems and appliances, and implementing weatheriiation.	High	Medium
Consumer appliances	Promote the adoption of high-efficiency appliances, such as refrigerators, washing machines, etc.	Medium	High
Improved cook-stoves (urban/ peri-urban)	Introduce more efficient cookers to reduce fuel consumption and emissions, while improving indoor air quality and health outcomes.	High	Medium
District heating/ cooling	Establish or improve centralised systems that provide heating or cooling to multiple buildings.	Medium	High
Niche EE opportunities	Improvements in the efficiency of specific building systems or equipment, such as lifts, etc.	Low	High
Low-carbon urban planning	Designing low-energy cities and communities through integrated land use, efficient transport systems, etc.	High	Medium

End-of-life stage

The projects are based on circular economy principles, focusing on deconstruction and material recovery to improve recyclability. This avoids emissions from waste disposal and reduces the need for virgin material to be produced.

Project type	Description	GHG reduction potential	MRV feasibility
Recovery of reusable materials	Selective dismantling to salvage and reuse components like steel beams or bricks, reducing the need for new production.	Medium	Low
Energy recovery in recycling processes	Using energy released during recycling activities, such as the combustion of waste materials like wood or certain plastics, to generate heat or electricity.	Low	High

FIGURE 7



RELEVANT METHODOLOGIES TO BE USED PER PROJECT TYPE

The methodologies use in building-sector project types serve to calculate and certify how much GHG emissions are reduced reliably. There are established approaches under the CDM, widely used voluntary standards such as developed by Verra and Gold Standard, and the emerging Article 6.4 methodologies. These methodologies define how baseline development, additionality testing, and MRV should be done.

Each project type must apply the methodology that best suits it, whether it involves efficient lighting and appliances, HVAC upgrades, or renewable energy.

Project type	Available methodology
	Production stage
Fossil fuel substitution in cement, lime, and aluminium/steel production	**ACM003 (CDM):** Substitution of fossil fuels in cement or quicklime manufacturing. Applicable to other energy-intensive processes like steel/aluminium, where similar baselines exist.
Clinker substitution/ blended cement production	**ACM0005 (CDM):** Large-scale energy efficiency in cement through blending, MRV based on measured energy savings and emissions reductions. Additionality stems from demonstrating financial barriers.
	AM0121 (CDM): Emission reduction from partial raw material switching and increased additives in blended cement, reducing the use of raw materials containing calcium and/or magnesium carbonates (e.g., limestone) to produce clinker.
	ACM0015 (CDM): Partial or full switch to alternative raw materials that do not contain carbonates in the production of clinker in cement kilns in existing and Greenfield cement plants, with or without additional energy efficiency measures.
Carbon capture and utilisation in concrete production	**VM0043 (Verra):** CO_2 Utilisation in Concrete Production methodology. Reduces emissions by capturing waste CO_2 and mineralising it into concrete products, thereby lowering cement use and permanently sequestering CO_2. Such projects may face obstacles such as delays in regulatory approvals, high costs associated with CO_2 capture technologies, time-consuming quality control procedures, and market fragmentation.
Industrial energy efficiency and fuel switching (cross-cutting for cement, metals, other building materials)	**AMS-II.D (CDM):** Methodology for energy efficiency and fuel-switching in industrial facilities. It applies to single or multiple sites in sectors such as cement, steel, or mining. Eligible activities include: • Upgrades to energy conversion equipment (e.g., boilers, motors) that supply heat, electricity, or mechanical energy within a facility. • Process improvements at specific production steps (e.g., kilns, furnaces) or across multiple processes (e.g., integrated production lines).
	Construction stage
Transport of building materials (e.g., ready-mix concrete delivery, use of local materials to reduce transport demand)	No directly applicable CDM/Article 6 methodologies identified. There are examples of concrete suppliers who are introducing and testing electric trucks that transport ready concrete from mixing site/factory to construction sites. The use of locally produced materials is also one way to reduce these emissions. These options are, however, not reflected in specific CDM methodologies.
Fugitive emissions from refrigerants or sealants	Existing methodologies for refrigerants (e.g., CDM HFC recovery) apply to the use stage, not construction.

Use stage	
Whole building energy efficiency & fuel switching	
Energy efficiency & fuel switching in new/ existing buildings (HVAC, renewables)	**AM0091 (CDM):** Supports energy efficiency and fuel switching in new buildings through interventions like efficient HVAC and renewable energy systems. MRV relies on baseline comparisons and energy audits, while additionality is demonstrated via barrier analysis, like cost.
Small-scale energy efficiency & fuel switching in buildings	**AMS-II.E (CDM):** Small-scale methodology for energy efficiency and fuel switching measures in buildings. MRV includes fuel consumption tracking and emissions factor application. Additionally linked to going beyond local norms.
Energy efficiency and/or energy supply projects in commercial buildings	**AMS-II.Q:** Combines energy efficiency with renewable energy in commercial buildings. MRV based on metered energy savings and renewable outputs. Additionality depends on exceeding regulatory baselines or overcoming technological barriers.
Weatherisation of residential buildings (insulation, appliances)	**VM0008 (Verra):** Improves insulation, air sealing, and the replacement of inefficient appliances, including heating and cooling systems, in single- and multi-family buildings. MRV options include performance or project method, with monitoring via adjusted baselines or consumption data. Barriers include high upfront costs, limited contractor capacity, and resident resistance.
Commercial building retrofits (efficient boilers, heat pumps, LEDs)	**VN_AM003 Ver1.1 (JCM):** Improves the energy efficiency of commercial buildings by installing high-efficiency boilers, heat recovery heat pumps, and LED lighting. Barriers include high equipment costs, technical complexity in retrofitting existing buildings, limited availability of suitable equipment, and a lack of regulation. MRV based on energy savings.
Double-bundled modular heat pumps for new buildings	**ID_AM010 Ver2.0 (JCM):** Introduces double-bundle modular electric heat pumps for simultaneous heating and cooling in new buildings. Comprehensive MRV covers heating/cooling outputs, electricity, and supplementary fuel. Data is collected through meters, equipment logs, and temperature sensors to accurately calculate emission reductions. Barriers include high capital cost, refrigerant availability, and integration challenges.
New residential buildings (holistic EE + RE)	**Energy Efficiency and Renewable Energy Measures in New Residential Buildings (Verra):** Emphasises holistic performance improvements in new residential projects. MRV tracks design innovations and energy system performance. Additionally, barrier analysis is ensured.
Appliance & equipment efficiency	
Energy efficiency and HFC 134a recovery in residential refrigerators	**AMS-III.X (CDM):** Targets residential refrigerators. Replacement of existing, functional domestic refrigerators by more-efficient units and recovery/ destruction of HFCs from the refrigerant and the foam.
Elevator energy recovery systems	**Energy-Saving through Elevator Regenerative Power System Implementation methodology (Gold Standard):** Captures and reuses energy lost during elevator braking. Barriers include high capital costs of equipment, technical difficulties in integrating the systems into existing buildings, a lack of regulatory incentives, and limited market awareness.

Improved cookstoves	**Simplified Methodology for Clean and Efficient Cookstoves (Gold Standard):** replaces traditional, inefficient cooking stoves with modern, cleaner-burning alternatives that meet specified thermal efficiency and emission standards. Barriers include high upfront stove/fuel costs, user reluctance, rural supply chain gaps, and stove maintenance challenges.
Recovery and recycling of construction materials	**Gold Standard – Recovery and Recycling of Materials from Solid Wastes methodology:** Supports diversion of materials such as metals, plastics, and minerals from landfills or incineration, for recycling and reuse in new building projects. Reduces demand for new raw materials and the associated GHG footprint of construction. Projects must show additionality via financial or barrier analysis, and proof of low market uptake.

Below are shown the methodologies for defining baselines, additionality, and MRV requirements, ensuring environmental integrity and consistency across carbon markets.

FIGURE 8 Methodologies for household and building energy efficiency

Cookstove	AMS-II.C., AMS-II.G.
Water pumping	AMS-II.C., AMS-II.S.
Water purifier	AM0086, AMS-II.C., AMS-III.AV.
Water saving	AMS-II.M.
Refrigerators/chillers	AM0060, AM0070, AMS-II.C., AMS-II.O., AMS-III.X.
Lighting	AM0046, AM0113, AMS-II.N., AMS-II.J., AMS-II.L., AMS-II.N., AMS-III.AR.
Whole building	AM0091, AMS-II.E., AMS-II.Q., AMS-II.R., AMS-III.AE.
Others/various technologies	AMS-II.C.

Source: UNFCCC, 2022[13]

13 UNFCCC, 2022. CDM Methodology Booklet. Accessed via: ***https://cdm.unfccc.int/methodologies/documentation/1611/CDM-Methodology-Booklet_fullversion.pdf***

GOOD PROJECT EXAMPLES

Various projects have demonstrated how emissions can be reduced in the building sector using mechanisms such as the CDM, voluntary carbon markets, and Article 6.2. The examples showcase various types of projects from clean cookstoves for homes and improvements in hotels to city-wide emissions reduction programmes and innovative models for deep building renovation.

Example 1: ACC Blended cement project (India)

The project aims to reduce of clinker content in cement by blending with fly ash. ACC Limited introduced a set of measures to substitute clinker at its New Wadi and Tikaria plants. This involved replacing part of the energy- and carbon-heavy clinker with fly ash in the process of making cement.

What it does	This project was one of the first large applications of clinker substitution recorded under the CDM. It showed how carbon finance can help speed up the reduction of carbon emissions in developing countries.
Results	It was planned that the project would cut 1.45 million tonnes of CO_2 during its first billing period, which ran from 2010 to 2016. Carbon taxes are expected to bring in 5–10 EUR/tCO_2 under Kyoto markets, which is equivalent to 1.2–2.4 million EUR per year. Lower production costs, fewer clinker imports, better industry efficiency, and better use of fly ash (a waste product) are all co-benefits.
Article 6 relevance	Cement blending significantly reduces emissions at low cost using proven methodologies. In addition, its MRV system is simple, making it easier to use in carbon markets. However, the risk of additionality arises when blending becomes an obligation or industry rule. A PoA-based approach could facilitate expansion to multiple cement plants and regions, with great potential for replication worldwide where suitable supplementary cementitious materials are available.
Lessons learned	The robust industrial methodologies of the CDM can serve as a basis for Article 6 activities, demonstrating the potential for achieving large-scale, cost-effective emission reductions in hard-to-mitigate sectors. Challenges in demonstrating additionality once clinker substitution becomes widespread or mandatory were also identified, and a plan for scaling up through PoA covering multiple cement plants and regions was proposed.

Example 2: Nigeria – Compact fluorescent lamps retrofit programme (PoA 9441)

Distribution and free installation of up to 40 million compact fluorescent lamps (CFLs) to replace incandescent bulbs in grid-connected households nationwide.

What it does	Up to 40 million CFLs were given out across the country to replace incandescent bulbs. This was done through DISCOs and trained community workers. The programme helped create Nigerias' MEPS standards for 2024 and the Carbon Market Activation Plan and draft carbon market policy (April 2025). These plans include a 5-year plan and a legal basis for allowing transfers and making the necessary changes.
Results	Emissions decreased in the first CPA by around 28,900 tCO_2e per year and are expected to reach more than 13 million CERs within ten years. This represents an estimated value of between 20 and 55 million dollars, assuming a price of 3 dollars per CER. In addition, the project achieved significant energy cost savings, reducing consumption by between 65% and 80% per bulb. It also reduced the load on the electricity grid by around 200 MW, improved the quality of indoor lighting, and promoted initiatives to recycle CFL and LED lamps.
Article 6 relevance	The project is a strong candidate for transition to Article 6.4, ensuring that future credit generation is maintained once Nigeria issues the necessary Authorisation Letters. Furthermore, it demonstrates how distributed energy efficiency measures under Article 6 can be effectively combined and offers important lessons for creating future LED lighting programmes that are in line with NDCs.
Lessons learned	The project used a scalable approach with a PoA architecture, which enabled improved regulatory reforms, including the implementation of minimum energy performance standards (MEPS). Good MRV practices applicable to energy efficiency projects in different areas were also created, showing great potential for replication in lighting and appliance replacement initiatives across West Africa.

Example 3: Improved cookstoves in Ghana (Article 6.2 project) – *Providing clean, efficient stoves to households to replace traditional wood and charcoal fires.*

This project, known as the **Transformative Carbon Asset Programme Cookstove Activity**, is one of the first fully authorised Article 6 projects. Ghana and Switzerland signed a bilateral agreement, and in February 2024, they approved the transfer of credits from this activity.[14]

What it does	Distributes 180,000 improved biomass cookstoves to rural and peri-urban families in Ghana. These stoves use less firewood/charcoal for the same cooking service and emit less CO_2 (and far less smoke, improving health than the cookstoves conventionally used).
Results	Expected emission reductions are significant – on the order of hundreds of thousands of tons CO_2 over the stoves' lifetimes for the programme as a whole. The project is on track to issue Ghana's first Article 6.2 carbon credits by late 2024. Co-benefits include reduced deforestation pressure and better indoor air quality.
Article 6 relevance	The project is agreed under Article 6.2, so the rules and procedures are as agreed between Switzerland and Ghana. While clean cooking is in Ghana's NDC, this project accelerates progress beyond what Ghana could unilaterally achieve and is therefore considered additional. Switzerland's KliK Foundation is funding it and will apply the credits toward Switzerland's NDC. The methodologies applied are comparable in stringency to CDM/PA6.4 methodologies.
Lessons learned	Early engagement with the host country is crucial – Ghana's Carbon Market Office was involved to ensure alignment with national climate goals from the start. Technically, the project builds on years of experience from similar CDM and Gold Standard cookstove projects, demonstrating that scaling up and proper monitoring (through surveys of fuel consumption, regular checks on stove usage) can yield a high-integrity project with a substantial impact on emissions. The key takeaway is that even relatively small-scale actions like household cookstoves can be aggregated to a national Article 6 programme, delivering both climate and development benefits, with the carbon market providing the finance to make it happen.

14 Eklavya, G. (2024, February 29). Switzerland, Ghana approve transfer of Article 6 credits from cookstove project. S&P Global Commodity Insights. Retrieved August 29, 2025, from ***https://www.spglobal.com/commodity-insights/en/news-research/latest-news/energy-transition/022924-switzerland-ghana-approve-transfer-of-article-6-credits-from-cookstove-project***

Example 4: Tokyo cap-and-trade programme in Japan (domestic urban policy) – *Targets and trading for Urban Building Efficiency*

In developed countries, carbon market mechanisms can drive building emissions reductions at scale. Tokyo, a megacity in Japan, launched the world's first urban cap-and-trade system for buildings in 2010. This is not an Article 6 project but a domestic market example; however, it offers valuable lessons for any market-based building mitigation.

What it does	Tokyo's programme set mandatory emission reduction targets related to the consumption of fuels, heat, and electricity in large commercial and industrial buildings, requiring buildings to cut their CO_2 emissions by increasing percentages in subsequent phases. Building owners are subject to surrender obligations, and all tenants are required to cooperate in the implementation of the owners' reduction measures. Large tenants are also required to prepare and submit their own emission reduction report. Buildings that reduce their energy consumption beyond targets can trade additional credits with those that underachieved.[15]
Results	By FY2017 (8 years into the programme), emissions from covered facilities were down 27% below baseline on average – a huge success, surpassing the compliance target. That's about 12 million tonnes of CO_2 emissions, 27% lower than the base-year total. This was achieved through numerous energy efficiency measures, including the installation of improved HVAC systems, the adoption of LED lighting, the implementation of energy management systems, and the purchase of renewable energy.
Article 6 relevance	While not developed as an Art. 6 activity, the emission reductions obtained under a similar programme could be developed under Art.6.2, If both countries involved could agree on the approach to determine emission reductions and the amount of ITMOs to be transferred from the host country to the buying country.
Lessons learned	A combination of regulation and trading creates strong motivation for building owners to invest in emission reduction measures. Together, they overcome financial barriers and split incentives between owners and tenants. The obligation for tenants to cooperate in owners' efforts to reduce emissions further helps reduce implementation barriers. This model demonstrates that aggregating multiple buildings under a single policy umbrella can yield significant reductions. For Article 6, one could envision a host country adopting a similar sectoral crediting approach: setting a baseline emissions level for the building sector or a subset of buildings, achieving reductions through policies, and converting the "excess" reductions into ITMOs. Tokyo's case also highlighted how a robust MRV system, annual reporting, and public disclosure are important for ensuring transparency and confidence in emissions reductions.

15 ICLEI Japan. (2019, February 19). Latest results: Tokyo Cap-and-Trade Program in the 8th fiscal year. ICLEI Japan. Retrieved August 29, 2025, from ***https://japan.iclei.org/en/news/latest-results-tokyo-cap-and-trade-program-in-the-8th-fiscal-year/***

Example 5: Hotel energy efficiency improvement project in India (CDM) – *A cautionary tale from the Kyoto era.*

The ITC Sonar Bangla, a luxury hotel in Kolkata, India, undertook a comprehensive energy efficiency upgrade in the mid-2000s and registered as a CDM project in 2006.

What it does	It applied a suite of emission reduction measures – more efficient diesel boilers, an upgrade of air conditioning chillers, installation of a magnetiser at the fuel inlet line of the steam boiler, efficient lighting, solar water heating systems, etc. This integrated approach targeted the supply side (such as improved boilers) and the demand side (such as reducing electricity use) to enhance overall efficiency.
Results	The project achieved energy savings of about 4.3 GWh per year, 2.2 GWh from diesel reduction, and 2.1 GWh from electricity savings. In terms of emission reductions, that corresponds to roughly ~3,000 CERs per year. While technically successful. However, the small scale meant that the revenue from these CERs was approximately equal to the costs of the CDM project cycle (consultants, validation, verification, issuance fees).
Article 6 relevance	Similar interventions using similar methodologies (AMS-II.B. and AMS-II.E.) could be used under Article 6. However, the challenges related to the project's small scale of a single hotel, suggest a bundled approach (e.g., for a hotel chain) or programmatic approaches that can cover many hotels would be more viable.
Lessons learned	The hotel project was not viable on its own. The CDM experience revealed that very few standalone building energy efficiency projects were registered. This is not because they failed to reduce emissions (they did), but rather the carbon revenue was marginal compared to transaction costs.

Example 6: Energiesprong net-zero energy retrofits in the Netherlands (market-driven bottom-up initiative) – *Innovative financing and performance contracting for housing upgrades.*

What it does	The approach uses energy bill savings, supported by a long-term performance guarantee, to finance investments in net-zero retrofits and new buildings. The energy savings are achieved by wrapping existing houses with new insulated facades/roofs integrated with solar panels, and upgrading heating to electric heat pumps – making each house energy neutral. This included the use of new bio-based materials. The same technologies are also applied to newly-built homes.
Results	Over 5,000 homes in NL were upgraded, cutting their CO_2 emissions dramatically, with a typical retrofit saving 1.5–2 tonnes CO_2 per house annually by eliminating gas heating and reducing power draw.[16] This was financed by an "Energy Performance Fee": Tenants continued to pay the same amount in their energy bill (or slightly less) after implementation of the energy-saving measures. The difference between the amount paid on the bill and the amount owed for the remaining energy consumption goes towards covering the retrofit investment. The Dutch initiative was subsequently scaled up and internationalised, with now more than 10,000 homes covered in the Netherlands, UK, France, Germany, and Italy. Energiesprong has won the Gold World Habitat Award for the 'innovative and financially sustainable approach to addressing climate change and improving energy efficiency in the building sector'.
Article 6 relevance	Assuming that such practices are not commonly used in the host country, the approach could be used to define a project that could be submitted under Article 6. The project design components of energy bill savings and long-term performance guarantees could be used to make the approach more economically viable and overcome the split incentive, demonstrating additionality by means of the barrier approach. It would require agreement on the MRV methodology used. Part of the energy savings could also cover the transaction costs of the PA6 project.
Lessons learned	The approach combines financing through on-bill savings with a performance-based approach to reduce risks - the contractor guarantees the house will be net-zero; if not, they cover any energy bills exceeding the target. Initially, a local project subsidised by the government brought together housing organisations, construction companies, and established a Market Development Team. Currently, it is a standalone initiative operating in the market and applied within different national contexts by national teams. The main takeaway is that integrated deep retrofits are feasible at scale with the right business model, resulting in very high emissions reductions (80–100%) in buildings. Additionally, it shows that such activities can be scaled up and implemented in different countries.

16 Energiesprong Global Alliance. (n.d.). What is Energiesprong? Retrieved August 29, 2025, from ***https://www.energiesprong.org/what-is-energiesprong***

KEY CROSS-CUTTING LESSONS

Aggregation and scaling

One of the clearest lessons is that aggregated programmes achieve outcomes that single projects cannot, something that is especially relevant for the buildings sector. The Ghana project aggregated 180,000 households; Tokyo aggregated 1,200 buildings; Energiesprong aggregated housing providers to achieve volume. Article 6 provides flexibility to create large programmes, and project developers should think beyond a single building – consider programmatic designs from the outset.

Economic viability and carbon price sensitivity

Innovative solutions to financing and risk management can help overcome traditional barriers such as the split incentive. Combining mandatory standards and trading (such as in the Tokyo example) or combining energy bill savings and long-term performance guarantees (such as in the Energiesprong example) can be effective ways to achieve this.

If carbon prices are low, projects with small volumes will not fly. As carbon credit demand (especially Article 6 with corresponding adjustments) is expected to command a premium, some borderline projects may become viable. Still, one should not rely solely on high prices – it is better to design projects that break even with moderate prices and treat higher prices as an upside. The examples of Tokyo and Energiesprong show that combining mandatory rules with trading systems or innovative financing with risk mitigation strategies can make projects more effective and resilient to price changes.

Importance of government involvement

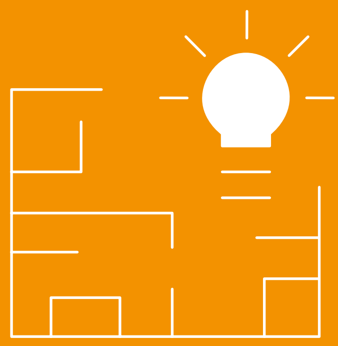
Implementing the projects in the success examples required more than just general government approval. This involved active political support or direct involvement, such as designing incentives, adjusting regulations, or facilitating financing and stakeholder coordination, as seen in Tokyo and Energiesprong, or close host country engagement, as in the Ghana project. Article 6 projects cannot be developed in isolation – early dialogue with authorities is essential to ensure alignment with national climate plans.

Accurate data and conservative baselines

Projects that succeeded in issuance (Ghana stoves, India hotel, Tokyo) all had to gather solid data to prove reductions. In Ghana, stove usage is monitored to confirm fuel savings; in Tokyo, energy bills are tracked and compared with historical emissions for each building; and in the hotel in India, sub-meters were installed to verify energy savings. These practices ensure compliance with project requirements and verify that there is improvement relative to baselines.

Sustainable development co-benefits can drive success

Cookstoves succeeded in part because they deliver health benefits; Tokyo's programme was partly motivated by energy security and showing climate leadership; Energiesprong improved home comfort and created local jobs (manufacturing prefab retrofit panels). Emphasizing these co-benefits is not just a nice-to-have – under Article 6, host countries often require demonstrating how projects contribute to SDGs.



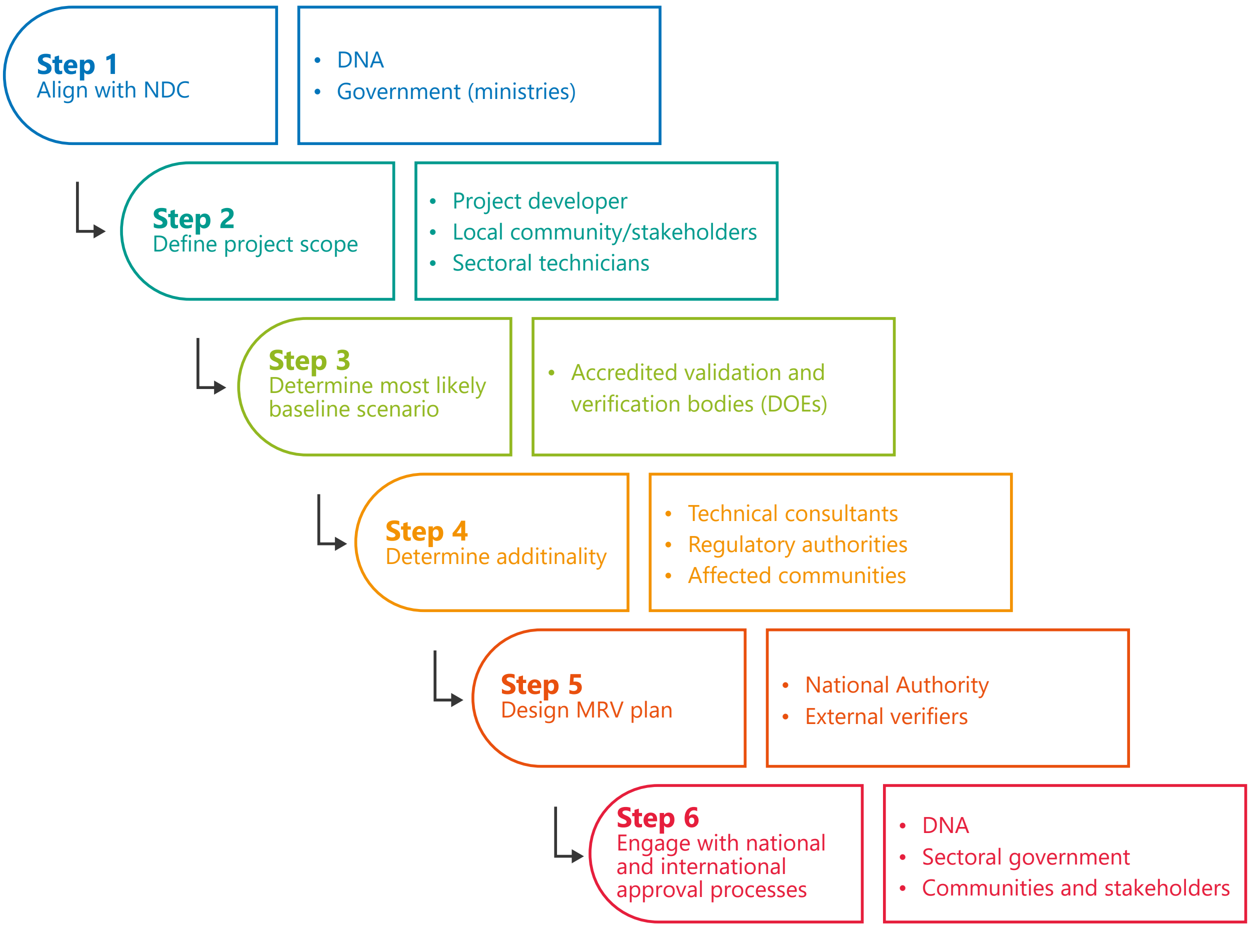
3 | Towards Project Viability

A step-by-step guide for developing and implementing an Article 6 project in the building sector is divided into seven key stages – from the initial concept to obtaining formal project approval and registration for credit issuance. It serves as a checklist for practitioners. Although the steps primarily reflect the cooperative approaches of Article 6.2, most of the steps also apply to Article 6.4 activities, where the requirements for baselines, additionality, and MRV are more standardised under the oversight of the UNFCCC. Following these steps ensures that essential aspects are addressed, including technical design, policy alignment, stakeholder engagement, and documentation.

STEP-BY-STEP PROJECT JOURNEY[17]

This step-by-step guide is presented in seven key steps of the project, followed by a detailed description of each stage to facilitate understanding and execution.

FIGURE 9



17 Note: The Project Design Document (PDD) format recommended in this Handbook matches the UNFCCC's Article 6.4 PDD Template (Version 1.0, 2024), available at ***https://unfccc.int/process-and-meetings/transparency-and-reporting/article-6/technical-guidance-on-the-article-64-mechanism***. Please keep in mind that all DNAs are encouraged to adopt this format or provide an equivalent.

STEP 1: ALIGN WITH NDC

This is a **key step specific to the Paris Agreement and the Article 6 era**. The project must ensure alignment not only with approved technical methodologies but also with the host country's climate strategy and participation criteria under Article 6. Key actions in this step:

FIGURE 10

Key actions

1. Review the host country's NDC: Identify if the project's sector, technology, building type or specific activity are mentioned. First, check whether the project activity falls within the host country's NDC and Aarticle 6 strategy. For example, does the country's NDC include a target or action for building energy efficiency or renewable energy in buildings? If so, determine if the project exceeds those targets. Host countries are cautious about authorizing credits that would undermine their own NDC achievements.

2. Check eligibility criteria or host country guidance: Many countries are developing Art 6. participation guidelines. Some might say, for example, they only want to authorise projects in specific sectors or on a particular scale. For instance, a country might decide not to authorise renewable energy projects if it can achieve those itself, but be open to, say, industrial energy efficiency projects.

3. Sustainable development alignment: Article 6.2 and 6.4 agreements often require demonstrating how the project contributes to sustainable development in the host country. Make sure the project supports local priorities (like job creation, energy access, and air quality).

4. Host country carbon market participation: Investigate if the host country is involved in bi/multilateral agreements for Article 6.2, as such agreements may have their own requirements. The host country may also be involved in other carbon market initiatives (e.g., the World Bank's Transformative Carbon Asset Facility, or regional Article 6 capacity building like the SPAR6C programme). If so, there may be ready support available.

STEP 2: DEFINE PROJECT SCOPE

Begin by clearly defining what the project entails and where it will be located. This involves identifying the mitigation intervention and setting the boundaries:

Intervention	Describe the main activity. It should be specific about the technology, practices, objectives, timelines for the implementation and project operation, its dimension, and involved actors (engineers, contractors, supervisors, authorities, suppliers, investors, etc.).
Geographical bounadary	Determine the physical location or area. It could be a single building, a city, or multiple sites across a country. For a building's PoA, the boundary might be "all participants in the programme within Country X". *It is worth noting that this is different from the project system boundary.*
System boundary	Identify which emission sources are included in the project's system boundary that is used for emissions accounting. For building projects, this typically refers to CO_2 emissions from energy use (such as electricity and fuels) in all stages within the building. If the project reduces on-site consumption of purchased heat or electricity (Scope 2), it includes the related emissions. Exclude sources that are not affected. Identify potential sources outside the system boundary, of which emissions may increase because of the project, to account for leakage. If the project also addresses other stages of the life cycle (such as construction materials or design), it must be defined whether these are included in the scope of accounting and in what way.
Baseline setting	Determine how the baseline will be established according to the selected or applicable methodology. If the method offers options, choose the one that can provide data.[18]
Additionality demonstration plan	The methodology might refer to an "Additionality Tool" (for PA6.4) or have built-in tests (like technology penetration rates or investment analysis). Plan how you will fulfill this. For example, if you are using the PA6.4 Tool, gather data on standard practices: Is the project activity (or its outcome required by law to be implemented? Are there similar projects in your country? Project developers typically apply an investment analysis under PA6.4 to demonstrate additionality. However, alternative approaches may be used when investment analysis is not feasible or appropriate (under PA6.2), so host and participating countries define their own criteria for assessing additionality. A project is more likely to be additional if the IRR drops below the required hurdle rate[19] or if the NPV is negative without carbon credit revenues, showing that the project would not proceed under business-as-usual conditions. The hurdle rate is determined by the project developer or national authorities under PA6.2 requirements. If the investment analysis fails to demonstrate additionality, assess whether other barriers exist that would prevent implementation of the project activity (see also Figure 2, p.11).
Conservativeness	Where methodologies give choices or default factors, lean towards conservative estimates (this can help in approval stages to show you're not over-crediting).

18 Methodology Fit Checklist" (Annex II-G) with yes/no questions aligned to each methodology section
19 If local penetration > 20%, use **combined additionality test** (investment + barrier) even for AMS-II.C

STEP 3: DETERMINE THE MOST LIKELY BASELINE SCENARIO

A. **Find the best-fit methodology:**[20] First, determine under which Article 6 mechanism the project will operate:

- Under Article 6.4, only the methodologies of this mechanism that have just been approved will be used.
- For the activities in Article 6.2, participants can choose the most appropriate methodology, which may include Article 6.4, former CDM, or methodologies from voluntary carbon markets.

This is **much more practical** than a generic search – it involves navigating each registry and utilizing its specific tools.

B. **Study the methodology requirements:** It is necessary to identify data for baseline development and emission monitoring, what tests are required to demonstrate additionality, and any specific conditions or limitations the methodology poses on the project. For instance, a methodology might require that replaced equipment be destroyed to prevent leaks. These could occur if old units are reused elsewhere and would continue to generate emissions. As the old units need a specific plan (e.g., by arranging and documenting the scrapping of old devices). The methodology may also have applicability conditions, such as "only for single-family homes". Ensure the project meets those conditions.

C. **Define the baseline scenario:** It should be written down what the baseline is and why. For example, *"Baseline scenario: Emissions are calculated assuming that the current chillers will continue to operate until the end of their useful life, at which point they will be replaced with similar units with standard efficiency. Emission levels per activity are estimated for each year of the accreditation period, using normal operating patterns without taking the project into account."* For CDM/Article 6.4 projects, multiple baseline scenarios must be developed. Justify why the chosen one is most likely based on facts and assumptions.

i. **Baseline calculation:** *Baseline emissions* are estimated for the crediting period using projected activity levels and emission factors. The only exception is if the baseline is set at a historical emissions level; otherwise, emissions expected in the absence of the project must be estimated. E.g., baseline emission factor for grid electricity, obtain the official number from the DNA or UNFCCC database. This factor is then multiplied by the projected electricity consumption for the crediting period to obtain baseline emissions. *Baseline energy consumption:* Consider using historical data (e.g., the average energy use of the building over the last 3 years) as a starting point for the baseline. Adjusted in line with anticipated changes in the use of the building or other relevant factors.

ii. **Ensure the baseline honours "conservativeness":** better to under-estimate baseline emissions than over-estimate. You might incorporate a safety margin or use the lower end of efficiency as a baseline for technology, etc., to avoid inflation of credits.

iii. For **complex projects**, consider if a dynamic baseline or updates are needed (some methodologies allow updating baselines during the crediting period[21] if things change, e.g., the grid gets cleaner).

20 Note: There is also the option of proposing a "new" methodology – this could potentially be developed on the basis of existing methodologies and then add some adjustments.

21 Note: The crediting period determines the time during which a project may generate emission reductions eligible for the issuance of credits. In accordance with Article 6 mechanism, the duration and renewal of the crediting period must follow the applicable rules and methodologies. Projects must review and update, if necessary, baseline and additionality assessments at the beginning of each new crediting period to ensure that they remain valid. When a host country updates its NDC, it may be necessary to reassess the project's eligibility to generate credits to ensure that it is in line with the country's new targets.

STEP 4: DETERMINE ADDITIONALITY

Assess additionality and define the baseline for the project:

A. **Conduct an additionality analysis:** Gather the evidence and perform the analysis to demonstrate that the project is additional. The analysis should include the following, as applicable:

Regulatory analysis

Assess whether project activities go beyond existing policies and measures in the host country, thereby ensuring that emission reductions would not otherwise be achieved. For example, demonstrate that energy efficiency mandates do not already require a certain level of performance to be achieved.

Investment analysis

Calculate the IRR or NPV of the project with and without carbon revenue. Define a hurdle rate that demonstrates the lowest acceptable return for the project; this rate is justified and convincing for approval. If, without carbon revenue, the IRR is below a typical hurdle rate, and with credit revenues it becomes attractive, document that. Include all assumptions (capital cost, energy prices, etc.). If using this approach, it also presents a sensitivity analysis (to show that even with variations, without carbon, it's not attractive).

Barrier analysis

If the project faces financial barriers beyond IRR or NPV (e.g., lack of access to finance or high borrowing costs) or non-financial barriers (e.g., lack of know-how, split incentive barrier, no access to credit, etc.), write these out with evidence.

BOX 4 Barrier analysis example

"No ESCOs currently operate in this region, indicating a barrier to implementing such retrofits without support," or "Our stakeholder interviews show building managers are reluctant to try technology X due to perceived risk – carbon finance will be used to guarantee performance, overcoming this barrier."

B. **Document compliance with the methodology:** Prepare the draft project design document (PDD) section covering baseline and additionality. This will also help when engaging validators or the DNA. Under Article 6.4, it is mandatory to submit a PDD; whereas, for Article 6.2, a similar document may be required, albeit in a different format.

STEP 5: DESIGN MRV PLAN

Create a thorough **MRV plan** that can be used to monitor relevant emissions accurately, completely, consistently, and verifiably[22]:

Identify sources and source streams	Identify existing emission sources within the project boundaries; these may include furnaces, boilers, generators, or other equipment/systems that generate emissions. Next, list the measurable flows that determine these emissions, such as fuel type and quantity.
Leakage mitigation	Revisit any potential leakage identified. For example, if onsite heat generation is replaced by purchased heat, this will replace standalone boilers with district heating. Consider a mechanism to collect and dispose of them.
List data needs	From the methodology and baseline calculations, list all the parameters that need to be monitored. For example: electricity use of the building (kWh), fuel consumption of the building (m^3 of gas), implementation rate of operating appliances, occupancy rates (if relevant), weather data (if needed for normalization), etc.
Assign responsibilities	Determine who will collect data and how. Will building owners report energy use? Will smart meters be installed that remotely send data? If a third party, such as an ESCO, is involved, include this in the agreements.[23]
Ensure quality control	Set up procedures for data quality – calibration of instruments (are your electricity meters accurate and calibrated yearly?), training of personnel for surveys (to avoid bias or mistakes), digital systems to reduce human error (like using a data logger rather than manual readings when possible).
Monitoring tools and infrastructure	Acquiring or budgeting for necessary equipment. This could be reading utility meters (maybe you need data sharing agreements with the utility) or deploying IoT sensors in buildings.
Data archiving	Plan how the data will be stored (spreadsheets, databases) based on the CDM guidelines, for how long, and how it will be reported. Plan how data gaps will be dealt with, e.g. when meters malfunction.
Validation and verification arrangements	Start considering who could validate/verify the project. Depending on the mechanism, the project design documents need to be validated by an independent verifier before the project can be approved and registered. After project implementation, project emissions must be verified by a different independent verifier. For Article 6.4, verifiers must be accredited by the UNFCCC; for Article 6.2, this can be decided by mutual agreement of the countries involved. Shortlist some accredited entities with building sector experience.

22 Note: Usually, all CDM methodologies have quite detailed descriptions of which data needs to be monitored - including frequency of data recording, etc. – and these must be followed exactly as described. Deviations may result in rejections of emission reductions for specific periods of the proposed monitoring period to be verified by the third party.

23 Note: Normally, under CDM, such matters are described in the monitoring plan of the PDD, and deviations from these will result in rejections of emission reductions for periods where the plan is not strictly followed.

STEP 6: ENGAGEMENT WITH THE NATIONAL AND INTERNATIONAL APPROVAL PROCESS

Once the project and documentation are finalised, the next step should be to formally start the host country's approval process for Article 6:

A. **Prepare required documents for host country approval.** Each host country establishes its own procedures, but most require a set of standard documents. For projects under Article 6.4, these national requirements must also comply with the rules and documentation standards established by the UNFCCC. As a project developer, you should be ready to compile the following:

   i. **Application Form** – Often provided by the DNA (Designated National Authority) or relevant ministry. This form typically requests information about the project entity, project scope, financing structure, and expected emission reductions.

   ii. **Project Idea Note (PIN) or Concept Note** – This format is used under section 6.4 to present project concepts for initial consideration. A short (5–10 pages) document summarizing the project concept, activities, target buildings or sites, technologies used, estimated emission reductions, sustainable development benefits, and financing approach.

   iii. **Project Design Document (PDD)** – A more detailed technical document (usually 30–60 pages) that follows an approved methodology. This is the comprehensive document containing all aspects – general description, boundary, baseline methodology application, additionality, monitoring plan, including ex-ante calculations of the expected emission reductions, stakeholder comments, environmental impacts, etc. The official UNFCCC PDD format must be used for Article 6.4 projects. Under Article 6.2, many DNAs provide their own national templates or require alignment with UNFCCC/Article 6.4 PDD formats.
   The PDD should include a narrative that shows how the project supports the host country's unconditional and conditional NDC targets and contributes to priority Sustainable Development Goals (e.g., SDG 7 on clean energy, SDG 11 on sustainable cities, SDG 13 on climate action).
   Under Article 6.4, a stakeholder consultation must be conducted during the PDD preparation. This involves engaging affected communities, building owners, or civil society organizations[24].

   iv. **Environmental and Social Safeguards Documentation** – Depending on national policy, you may need to include environmental impact assessments (EIA) or social safeguard plans to ensure the project does not create negative externalities.

Next, in accordance with Article 6.4, the project must go through a couple of additional steps: submission of the PDD for global stakeholder consultation, while the UNFCCC publishes the document and receives comments from the international community, and formal approval by the host party, which verifies that the project complies with national policies and is eligible.

B. **Submit and communicate:** After preparing the package, submit it to the DNA or equivalent authority. If unknown, the UNFCCC publishes a list of DNAs under the Climate Convention. Once submitted:

   i. Review that the DNA has confirmed receipt of the submission and provided a *timeline* for review.

   ii. Be ready to respond promptly to questions or requests for *clarification*.

   iii. In some cases, project developers may be invited to *present the project* to the committee or provide additional data before approval.

24 Note: Some countries' DNA usually have quite clear guidelines on how such public stakeholder consultations must be performed and reported.

C. **Host country letter of authorisation:** The goal of this process is to obtain an official Letter of Authorization (also known as an approval decree). This LoA confirms that:

   i. The project is *authorised* to operate under Article 6 in the host country.
   ii. The project developer/entity is *recognised* as an eligible participant.
   iii. The project is *consistent* with the host country's NDC and sustainable development strategy.
   iv. The *host country commits* to applying corresponding adjustments to transferred ITMOs or A6.4ERs.
   v. The crediting period and maximum volume of transferable *units are defined*.

D. **Stakeholder consultation:** Some host countries or standards require evidence of local stakeholder consultation. If it has not already been done, a meeting should be organised with building owners, occupants, or local NGOs to present the project and gather feedback. It should then be demonstrated how the feedback is considered in the project's (potentially redesigned) development and implementation. This is often a requirement in mechanisms, as CDM requires it (Article 6.4 will also require local stakeholder consultation).

The final preparation part is getting all the documentation for formal registration:

A. **Finalise the PDD**
Refine the draft from prior steps to a final form, taking into account the feedback from stakeholder engagement. Ensuring consistency throughout (e.g., the number of buildings in the introduction matches what is in the emission calculation section).

B. **Validation (if required at this stage)**
Under Article 6.4, following the respective reviews of the PDD, the DOE may issue Corrective Action Requests (CARs) or Clarifications. Once the DOE is satisfied, they issue a Validation Report stating the project meets requirements. In relation to Article 6.2, depending on the bilateral process, a third-party validation may be required, or the host country might also carry out an independent assessment.

C. **Submit to registry / international body:**

For Article 6.4 projects: After host country approval and validation, it should be submitted to the Article 6.4 Supervisory Body via the Article 6.4 registry. The Supervisory Body formally approves the projects.

For Article 6.2 projects: Ensure the project is recorded in the *Article 6 database* that the UNFCCC Secretariat manages for bilateral cooperation. This is likely to involve the host country communicating the details of the cooperative approach and the project to the Secretariat.

D. **Plan for verification and issuance**
Although not strictly part of the registration process, it is essential to prepare for the *verification and issuance phase* early in project planning. This includes engaging a qualified verification body in advance and establishing a clear timeline. For example, a project might plan to monitor activities throughout 2026, with the *first verification* scheduled for early 2027 to cover the reductions achieved during 2026.

The exact steps and timelines can vary slightly depending on the host country's procedures, so early coordination with national authorities is important.

4 Article 6 Toolkit

All the resources, methodologies, and capacity-building programmes needed to access Article 6 financing for buildings

LIST OF METHODOLOGIES IN WHITE PAPER ANNEX II

The methodological toolbox for interventions in the buildings sector draws heavily from several generic and sector-specific methodologies, including those from CDM and VCM. The following tables provide an overview of some key methodologies applicable across the building life cycle.

The meaning of the methodology numbers is explained below, in accordance with the provisions of the White Paper:

- AM = Approved Methodologies for Programmatic CDM: Designed for project activities that involve multiple, geographically dispersed actions, such as renewable energy projects or energy efficiency improvements in buildings across different locations.
- ACM = Approved Consolidated Methodologies: Developed by consolidating and streamlining existing methodologies, aiming to simplify the process for project developers.
- AMS = Approved Small-Scale Methodologies: Designed specifically for projects with relatively small emission reductions, often with simplified procedures and less stringent requirements.

Methodology number	Sectoral application	Points of note
AM009	Petrochemicals	Recovery and utilization of gas from oil fields that would otherwise be flared or vented – Version 7.0.
AM0038	Non-ferrous metals	Methodology for improved electrical energy efficiency of an existing submerged electric arc furnace used for the production of silicon and ferro alloys – Version 3.0.0.
AM0059	Iron & steel, non-ferrous metals	Reduction in GHGs emission from primary aluminium smelters – Version 2.0.
AM0066	Iron & steel	GHG emission reductions through waste heat utilisation for pre-heating of raw materials in sponge iron manufacturing process – Version 2.0.
AM0068	Ferrous metals	Methodology for improved energy efficiency by modifying ferroalloy production facility – Version 1.0.
AM0106	Building materials	Energy efficiency improvements of a lime production facility through installation of new kilns – Version 2.0.0.
AM0109	Iron & steel	Introduction of hot supply of Direct Reduced Iron in Electric Arc Furnaces – Version 1.0.0.
AM0114	Chemicals	Shift from electrolytic to catalytic process for recycling of chlorine from hydrogen chloride gas in isocyanate plants – Version 1.0.
AM0115	Iron & steel	Recovery and utilization of coke oven gas from coke plants for LNG production – Version 1.0.

AMS-I.C	Paper	Thermal energy production with or without electricity – Version 22.0.
AMS-III.B	Chemicals	Switching fossil fuels – Version 18.0.
AMS-IILLBA	Electronics	Recovery and recycling of materials from E-waste – Version 4.0.
AMS-III.M	Recycling, paper	Reduction in consumption of electricity by recovering soda from paper manufacturing process – Version 2.0.
AMS-III.V	Iron & steel	Decrease of coke consumption in blast furnace by installing dust/sludge recycling system in steel works – Version 1.0.
AMS-III.Q	Chemicals, paper	Waste energy recovery – Version 6.1.
AMS-III.Z	Building materials	Fuel Switch, process improvement and energy efficiency in brick manufacture – Version 6.0.
Crosscutting interventions (also) used in industry		
AM0017	Cross-cutting	Steam system efficiency improvements by replacing steam traps and returning condensate – Version 2.0.
AM0018	Cross-cutting projects in Chemicals, Petrochemicals, Paper, Food	Baseline methodology for steam optimization systems – Version 4.0.
AM0044	Cross-cutting	Energy efficiency improvement projects - boiler rehabilitation or replacement in industrial and district heating sectors – Version 2.0.0.
AM0048	Cross-cutting	New cogeneration project activities supplying electricity and heat to multiple customers – Version 5.0.
AM0049	Cross-cutting	Methodology for gas-based energy generation in an industrial facility – Version 3.0.
AM0055	Cross-cutting	Efficiency improvement by boiler replacement or rehabilitation and optional fuel switch in fossil fuel-fired steam boiler systems – Version 1.0.
AM0060	Cross-cutting	Power saving through replacement by energy efficient chillers – Version 2.0.
AM0063	Cross-cutting	Recovery of CO_2 from tail gas in industrial facilities to substitute the use of fossil fuels for production of CO_2 – Version 1.2.0.
AM0076	Cross-cutting	Implementation of fossil fuel trigeneration systems in existing industrial facilities – Version 2.0.

AMS-I.C/IID	Cross-cutting Projects in Iron & Steel, non-ferrous metals, Petrochemicals, Chemicals, Cement, Building materials, Glass, Paper, Machinery, Electronics, Food, Textiles, Construction	Energy efficiency and fuel switching measures for industrial facilities – Version 13.0.
AMS-II.C	Mining, Chemicals, Machinery, Textiles, Electronics	Demand-side energy efficiency activities for specific technologies – Version 16.0.
Fuel switch interventions in industry, including switching to renewable energy		
AM0082	Iron & steel	Use of charcoal from planted renewable biomass in a new iron ore reduction system – Version 2.0.
ACM003	Building materials	Partial substitution of fossil fuels in cement or quicklime manufacture – Version 9.0.
Interventions to reduce industrial process emissions		
ACM005	Cement	Increasing the blend in cement production – Version 7.1.0.
AM0021	Chemicals	Baseline Methodology for decomposition of N2O from existing adipic acid production plants – Version 3.0.
AM0027	Chemicals	Substitution of CO_2 from fossil or mineral origin by CO_2 from biogenic residual sources in the production of inorganic compounds – Version 3.0.
AM0028	Chemicals	N2O destruction in the tail gas of Caprolactam production plants – Version 6.0.
AM0030	Non-ferrous metals	PFC emission reductions from anode effect mitigation at primary aluminium smelting facilities – Version 4.0.0.
AM0065	Non-ferrous metals	Replacement of SF6 with alternate cover gas in the magnesium industry – Version 2.1.
AM0078	Electronics	Point of Use Abatement Device to Reduce SF6 emissions in LCD Manufacturing Operations – Version 2.0.0.
AM0081	Iron & Steel	Flare or vent reduction at coke plants through the conversion of their waste qas into dimethyl ether for use as a fuel – Version 1.0.
AM0096	Electronics	CF4 emission reduction from installation of an abatement system in a semiconductor manufacturing facility – Version 1.0.0.
AM0111	Electronics	Abatement of fluorinated greenhouse gases in semiconductor manufacturing – Version 1.0.0.

ACM0019	Chemicals	N_2O abatement from nitric acid production – Version 4.0.
AMS-III.N	Building materials	Avoidance of HFC emissions in rigid Poly Urethane Foam (PUF) manufacturing – Version 3.0.
Construction		
AMS-III.BH		Displacement of production of brick and cement by manufacture and installation of gypsum concrete wall panels – Version 1.0.

CAPACITY-BUILDING PROGRAMMES

Various international initiatives are underway to help countries and project developers engage with Article 6. For example:

A. **UNFCCC** conducts webinars, training courses, and develops practical guides and templates that are deployed centrally or through regional climate collaboration centres to ensure they are adapted to different contexts[25].

B. The **Article 6 implementation partnership (A6IP)** – a global partnership that has engaged 90+ countries to share knowledge on Article 6 implementation.[26]

C. **SPAR6C (Supporting Preparedness for Article 6 Cooperation):** Implemented by GGGI and partners in Colombia, Pakistan, Thailand, and Zambia.[27] It provides decision support on Article 6 strategy, technical assistance to identify mitigation activities, and a Community of Practice (CoP-ASIC) platform. Joining such a community can connect you with peers and experts, and you may find opportunities to get your project concept examined or included in national pipelines.

25 Capacity-building Initiatives for Climate Action, via ***https://unfccc.int/topics/capacity-building/capacity-building-initiatives***

26 Capacity-building for implementing Article 6 of the Paris Agreement, via ***https://unfccc.int/sites/default/files/resource/cma2024_inf01.pdf***

27 Article 6 Governance Frameworks in Action A collection of case studies from 6 host countries, via ***https://www.spar6c.org/sites/default/files/downloads/best-practices/SPAR6C%20-%20A%20collection%20of%20case%20studies%20from%C2%A06%C2%A0host%C2%A0countries_28-02-2025.pdf***

WHERE TO LEARN MORE

Online platforms and communities supporting Article 6 in energy efficiency and construction:

Platform	Description	Link
Architects Climate Action Network (ACAN)	ACAN is a network of architects advocating for low-carbon design and retrofitting, aligning with sustainable building practices under Article 6	***https://architectscan.org/***
Planet2050 – Article 6 insights	Planet2050 provides insights into how Article 6 can incentivise investments in climate solutions, including in the construction sector	***https://planet2050.earth/blog/article6-pacm***
San Jose Principles – signatories	The San Jose Principles for High Ambition and Integrity in International Carbon Markets, established in 2019, set out principles that the Article 6 rulebook should fulfil at a minimum to effectively contribute to reaching the goals of the Paris Agreement.	***https://cambioclimatico.minae.go.cr/sanjoseprinciples/countries-backing-the-principles/***
Integrity Council for the Voluntary Carbon Market (ICVCM)	Establish and maintain global standards that ensure a high-integrity voluntary carbon market.	***https://icvcm.org/***

ANNEX

To find the best fit methodology, here's how to do it step by step:

Methodologies	Advice to find the best-fit methodology
CDM (Clean Development Mechanism)[28]	Go to the UNFCCC CDM Methodologies page and use the *methodology search tool*.[29] It is possible to filter by sector or enter keywords. For a building energy efficiency project (like an LED lighting retrofit or efficient HVAC upgrade), filter by the **energy demand** sector or search terms like "lighting" or "HVAC." For example, the CDM has a small-scale methodology, **AMS-II.J:** *"Demand-side activities for efficient lighting technologies"*, which is designed for projects that distribute or retrofit efficient light bulbs.[30] If the project involves replacing traditional bulbs with LEDs, AMS-II.J could be a strong candidate.
Gold standard	Gold Standard maintains its own list of approved methodologies (including many adopted from the CDM). Use the **Gold Standard eligible methodologies tool**, which is basically a database (often an Excel or web page) listing all methodologies eligible under Gold Standard.[31] In that tool, methodologies are grouped by category; look under the **"energy demand"** or **"energy efficiency"** categories for building-related methods. Use clear keywords in the document's search (e.g., "lighting," "building efficiency," "HVAC"). For instance, Gold Standard has approved methodologies for energy efficiency in households and buildings – one example (now retired) covered the distribution of efficient light bulbs to households. If your project is an LED lighting retrofit in a building, identify a methodology in the Gold Standard list that covers efficient lighting or building energy savings.
Verra (VCS programme)	In Verra's **VCS methodologies** page is also useful to use their search filters. Verra's site allows filtering active methodologies by sectoral scope (e.g., Energy, Transport, AFOLU, etc.).[32] For a building efficiency project, choose **sectoral scope 3: energy demand** (this covers energy efficiency on the demand side) and then search within those results for relevant terms. You can also use the site's search bar for keywords like "lighting" or "energy efficiency." For example, Verra's active methodology list under Energy Demand includes methods like **VM0018** *"Energy efficiency and solid waste diversion activities within a sustainable community"* and **VM0025** *"Campus clean energy and energy efficiency"*, which could be relevant for building upgrades. Verra also allows use of approved CDM methodologies: for instance, the AMS-II.J lighting methodology (discussed above) and others from the CDM are recognised as VCS methodologies (Verra's database shows AMS-II.J as an approved methodology under its Energy Demand category, active as of Nov 2023).

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