

# CLIMATE FORWARD ►

A new market option to  
accelerate climate action

January, 2019

# Climate Action Reserve: a nonprofit dedicated to market based solutions to climate change

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## GHG Accounting Experts

- Pioneered standardized GHG accounting, leading to robust, reliable, and transparent compliance and voluntary carbon markets
- 78% of North American offset credits used by companies and individual in 2017 in the voluntary market\* are issued by the Reserve
- Design innovative GHG accounting frameworks that are user-friendly, and financially feasible

## Beyond Carbon Offsets

- **Climate Forward**
- Climate Impact Score
- GHG policy consulting
  - Mexico
  - Ontario
  - Quebec
  - World Bank, USDA, USAID
  - California agencies, and more



CLIMATE  
ACTION  
RESERVE



The world is running out of time to address climate change

We need more strategies and investment in climate mitigation

**All future projects that increase GHG emissions  
should be carbon neutral**

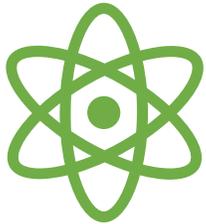
# Accelerating climate mitigation solutions: Climate Forward

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Enables companies to invest now in emissions reduction projects with high environmental integrity to mitigate future emissions

- **Credits recognized today to address future impacts**



Expands the scope and scale of feasible climate action across the economy

- **Enormous potential for diverse, creative climate solutions**



Issues Forecasted Mitigation Units (FMU) to projects that follow Reserve-approved methodologies

- **1 FMU = one metric ton of anticipated CO<sub>2</sub>e reduction, to counter anticipated GHG emissions**



Tracks FMUs and project activities in a publicly accessible database

- **A registry of forward-looking GHG reductions to balance against forward-looking GHG impacts**

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## Companies and organizations mitigating future emissions

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- Any new investment creating GHGs
  - Not appropriate for addressing current emissions in a compliance program
    - e.g., cap-and-trade
  - Not appropriate for any company or organization mitigating historical emissions
    - Cannot mitigate past emissions with future actions
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## Examples of future mitigation needs

- New manufacturing facility
- New data center
- New retail complex
- New residential/commercial developments
- New transportation projects

## Methodology & Project Development

- 1) Methodologies are developed by interested parties, then reviewed and approved by the Reserve
- 2) Projects are then implemented according to an approved methodology

Methodologies accepted into the program must:

- Reflect rigorous and conservative ex-ante quantification approach for estimated GHG reductions
- Include built-in Project Resilience Measures to provide reasonable assurance that future performance of the mitigation project will meet expectations
- Methodologies must have broad geographic applicability

## Public Registry

- FMUs are issued upon confirmation of project activities, based on conservative quantification
- Crediting incentives provided to encourage ongoing monitoring and verification
- Tracks transaction of credits in a publicly accessible system
- Transparent project administration
- Project listing, registration, monitoring, and confirmation review
- Conflict of interest assessment, audits, agreement execution

# Ensuring environmental integrity at the program, methodology, and project levels

- **Program as a whole will generate more reductions than is credited for**
  - Lower bound of future credits issued on an ex-ante basis
  - Ex-ante Risk Pool Contribution
- **Methodology screening process ensures only project types suitable for ex-ante crediting are accepted into the program**
  - Project types requiring extensive ongoing management decisions and financing to ensure long-term success are *NOT* appropriate for this program
  - Project Resilience Measures are required in each methodology to mitigate project risks upfront
- **Project quantification approach accounts for risk of reductions not being achieved as forecasted**
  - Account for Performance/Efficiency Decline
  - Account for Probabilities of Non-achievement (Sequestration)
  - Account for Abandonment Rates

# Climate Forward vs Existing Carbon Crediting Mechanisms

- Climate Forward is a voluntary, complementary measure to existing efforts to curb climate change, including compliance programs such as California's Cap-and-Trade program
- The Reserve encourages all parties to invest in carbon reduction projects and activities, including in Climate Forward projects, carbon offset projects, LCFS credits, and other voluntary credits/programs as appropriate
- **Climate Forward unlocks new emissions reduction opportunities by:**
  - Enabling companies to customize and implement projects that meet local needs
  - Providing a pathway to ensure new economic activities are not increasing emissions baselines
  - Generating supply of carbon credits from projects, sectors and regions not accessible through existing programs

# Participating in Climate Forward

- **Project Proponent:** organizations that implement and finance new Climate Forward projects through capital investment
  - Can choose to retire FMUs against their own future stream of emissions (i.e.: from a new retail complex)
  - Or, choose to sell FMUs to other end users
- **Methodology Developer:** organizations that develop methodologies and submit them to the Reserve for program approval
  - Project Proponents can implement projects based on existing methodologies
  - Or, choose to develop new methodologies to implement new project ideas
- **FMU User:** organizations that purchase and retire FMUs issued to existing Climate Forward projects

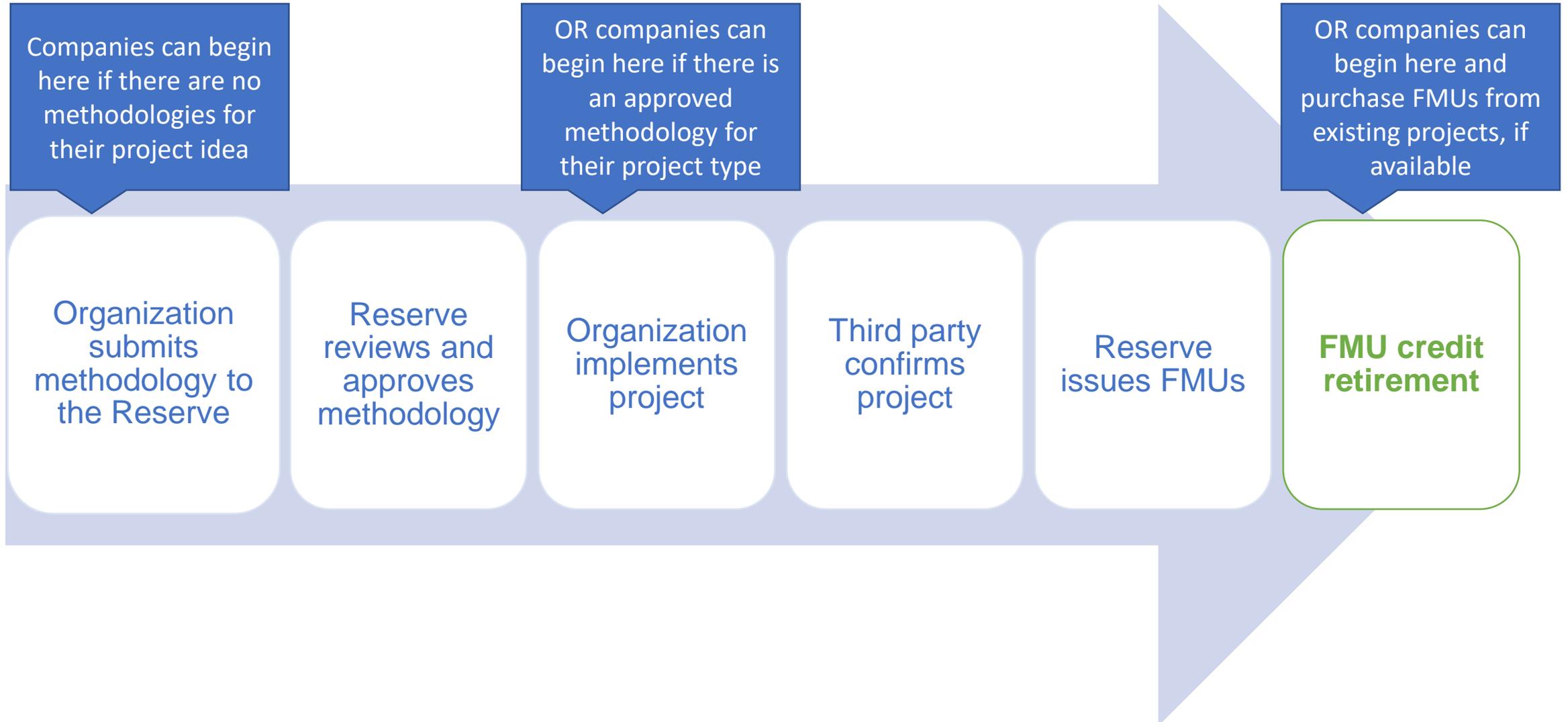
**A single organization may play all three roles or only one, depending on interest and expertise, or work with other firms to meet Climate Forward objectives**

# Participating in Climate Forward: in the CEQA context

- **Lead Agencies** should encourage all new developments to consider pathways to carbon neutrality
- **Climate Forward** can provide transparency and standardization for net zero developments as a registry of **forward-looking credits to mitigate the forward-looking GHG impacts** determined through the CEQA process.
- **Companies** should work with Lead Agencies to determine appropriate GHG mitigation measures. If using Climate Forward to meet mitigation objectives...
  - 1) Determine whether there are existing methodologies for projects that meet their needs, or develop methodologies for new project types to achieve local/community objectives
  - 2) Implement Climate Forward project(s) and undergo confirmation to receive FMUs
  - 3) Retire FMUs in the public registry

# Climate Forward in action

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# Methodology approval, project confirmation and crediting

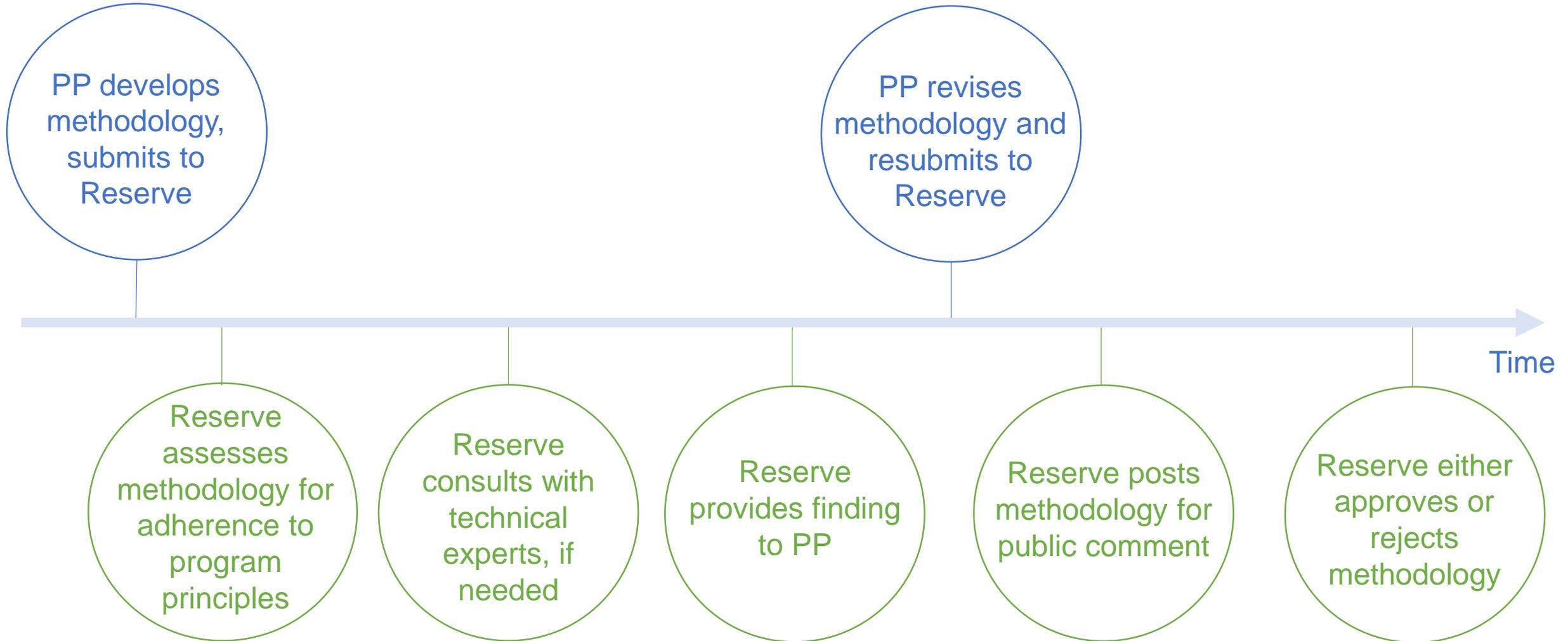
# What is a conservative methodology?

Methodologies are developed by interested parties, then reviewed and approved by the Reserve:  
expert review → public comment → Reserve approval

Real	Additional	Permanent	Confirmable	Enforceable
<ul style="list-style-type: none"><li>• GHG accounting is conservative, comprehensive and scientifically credible</li></ul>	<ul style="list-style-type: none"><li>• GHG reductions would not have occurred in the absence of the FMU market incentive</li></ul>	<ul style="list-style-type: none"><li>• GHG reductions or removals persist for at least 100 years, accounting for any reversals</li></ul>	<ul style="list-style-type: none"><li>• <i>Ex-ante</i> third-party confirmation of project implementation prior to credit issuance</li></ul>	<ul style="list-style-type: none"><li>• No other parties may reasonably claim ownership of GHG reductions resulting from project</li></ul>

**Permanence:** sequestration projects must incorporate appropriate discounts to account for the risk that a given GHG reduction will not remain out of the atmosphere for the 100-year permanence period

# Methodology approval: an iterative process



# Project confirmation

- Confirmation Bodies requirements
  - Third Party Accreditation through IAF member body + additional Reserve requirements
  - Conflict of Interest assessment
- Confirmation Body activities
  - Desktop documentation review and a site visit assessment
  - Ensure implementation of Project Resilience Measures
  - Ensure project is operating as intended
- Confirmation takes place after the project is installed; depending on project type, confirmation activities cannot begin until an appropriate period of time after project implementation and operation to guard against project failure
- Credit issuance contingent upon successful confirmation

# Three stages for projects to receive credits

Stage 1: Upon confirmation of project implementation

- Initial issuance of FMUs following confirmation of activities

Stage 2 (optional): At the end of the initial crediting period

- To claim reductions not issued in the first stage, assuming sufficient ex-post monitoring and verification

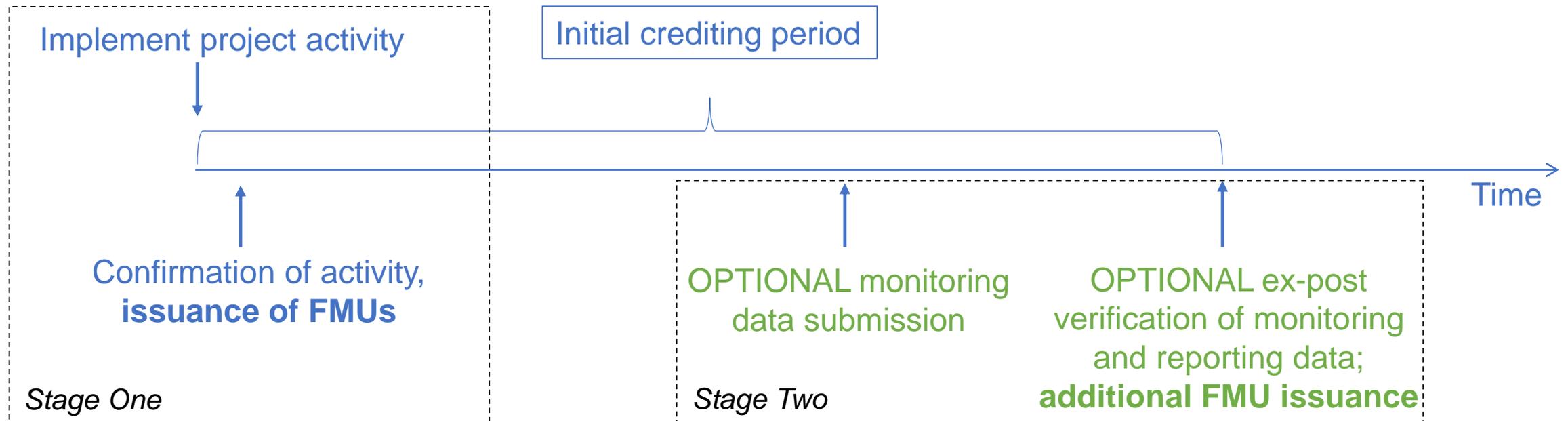
Stage 3 (optional): After the end of the initial crediting period

- Assuming project proponent can demonstrate additional useful life
- Following successful ex-post monitoring and verification

# Voluntary monitoring incentive program

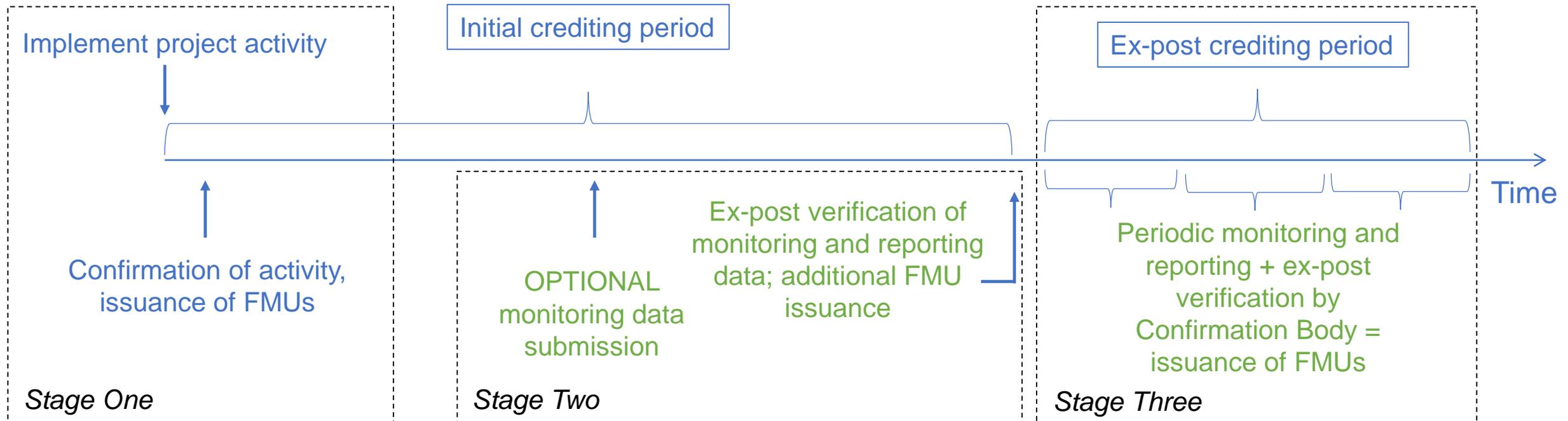
In addition to ex-ante FMU issuance upon successful project implementation and confirmation, **projects may pursue additional FMU issuance if they:**

- Monitor and report project activity and data at a frequency identified in applicable methodology
- Complete ex-post verification at the end of the project crediting period



# Voluntary transition to ex-post credit issuance

- After completion of ex-ante crediting period, **projects may opt to receive ex-post credits** upon project renewal and ongoing monitoring, reporting, and verification
- Projects that opt-in to the voluntary incentive program are eligible for this option



# How to take Climate Forward action

- 1) **VIEW** program documents available online at <http://www.climateactionreserve.org/climate-forward/>
- 2) **DEVELOP & SUBMIT** innovative methodologies across multiple sectors
- 3) **INVEST** in projects now. Contact the Reserve to explore and be connected with project opportunities
- 4) **SIGN UP** for our monthly newsletter to stay up to date on program news by contacting Cindy Chiang at [cchiang@climateactionreserve.org](mailto:cchiang@climateactionreserve.org)

# Thank you! Questions?

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Contact us any time at:  
**[info@climateforward.org](mailto:info@climateforward.org)**