CLIMATE ACTION RESERVE

China Adipic Acid Production Protocol V1.0

Workgroup Meeting 1

May 24 (USA) // May 25 (China), 2023

Simultaneous Translation

- This meeting we are utilizing simultaneous translation provided by Speed Asia
- To switch languages from English to Mandarin, select “Chinese” as highlighted below from your zoom panel

- Attendees that are listening under the interpretation setting will be able to hear the translation at a higher volume, and English will be present at a lower volume
  - If listening in English, Mandarin will be present at a lower volume.
  - To only hear the translator, you can select “mute original audio”
- Attendees that prefer Mandarin may follow along using Mandarin slides provided in chat[2]

Housekeeping

- Workgroup members have the opportunity to actively participate throughout the meeting
  - Ask that you keep yourselves muted unless / until you would like to speak
- Workgroup members should be aware of the pace of their speech to be mindful of the translators—please do not speak too fast
- We will ask and take questions throughout the session
  - Please use the raise your hand function
- All other attendees/observers are in listen-only mode
- Observers are free to submit questions in the question box
- We will follow up via email to answer any questions not addressed during the meeting
- The slides and a recording of the presentation will be posted online

AGENDA

- Introductions
- Process Overview
- Protocol Considerations
  - Start up testing
  - Defining Additionality
  - Bypass of Control Unit and Venting
  - Monitoring and QA/QC
- Open Discussion
- Next Steps

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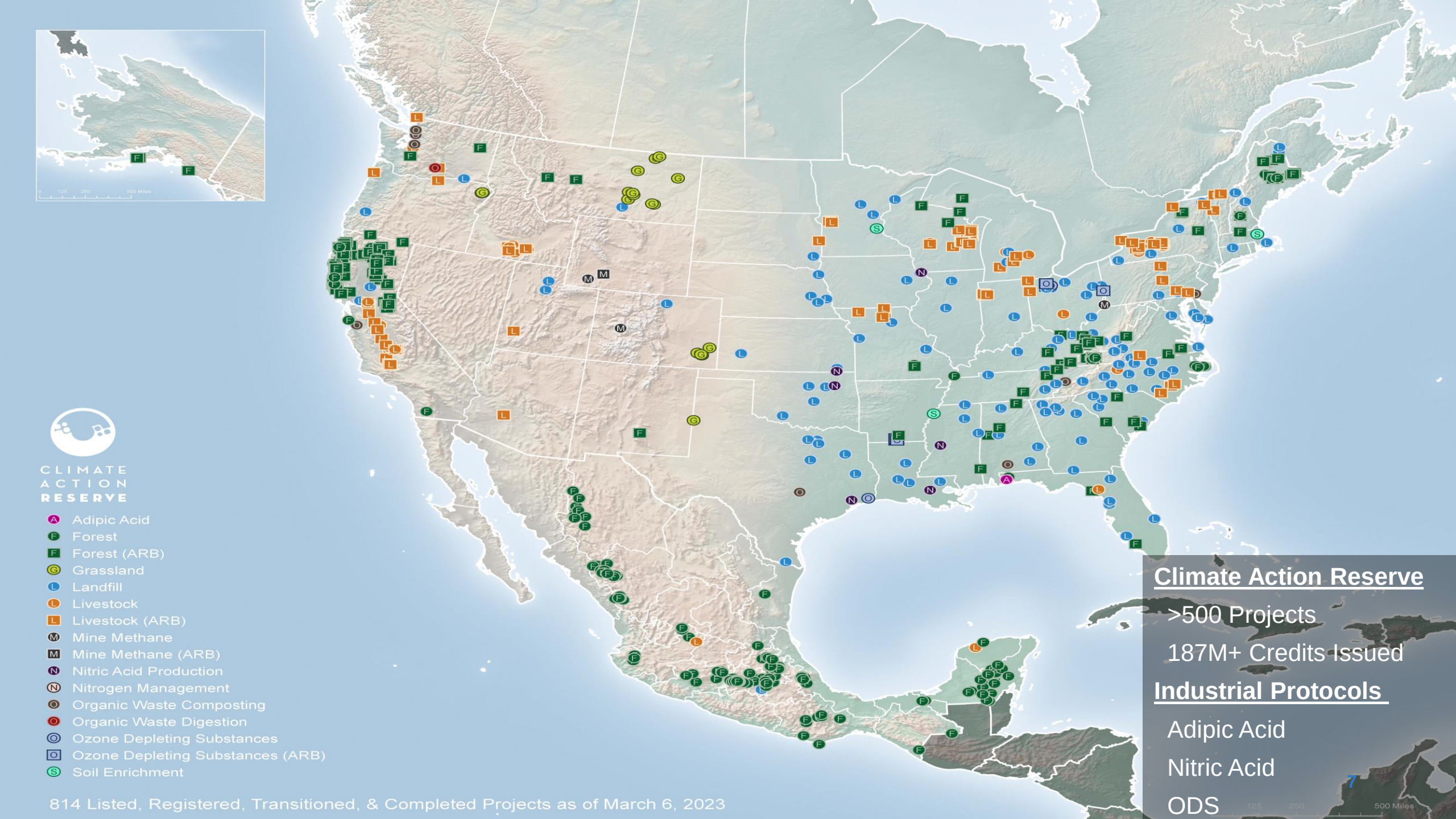
INTRODUCTIONS

Climate Action Reserve

- Mission: to develop, promote and support innovative, credible market-based climate change solutions that benefit economies, ecosystems and society
- Develop high-quality, stakeholder-driven, standardized carbon offset project protocols
- Accredited Offset Project Registry under the California cap-and-trade program and State of Washington Cap & Invest program
- Serve compliance and voluntary carbon markets
- Reputation for integrity and experience in providing best-in-class registry services for offset markets
- Based in Los Angeles, CA
- But we operate virtually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Adipic Acid
Forest
Forest (ARB)
Grassland
Landfill
Livestock
Livestock (ARB)
Mine Methane
Mine Methane (ARB)
Nitric Acid Production
Nitrogen Management
Organic Waste Composting
Organic Waste Digestion
Ozone Depleting Substances
Ozone Depleting Substances (ARB)
Soil Enrichment
814 Listed, Registered, Transitioned, & Completed Projects as of March 6, 2023
Climate Action Reserve
>500 Projects
187M+ Credits Issued
Industrial Protocols
Adipic Acid
Nitric Acid
ODS
500 Miles

Purpose of Workgroup Meetings

- To familiarize workgroup members with offset protocol development process – what we typically want in an offset protocol
- To present and solicit feedback from workgroup members on key considerations for the China Adipic Acid Production Protocol Version 1.0
- Provide draft protocol for reference and then revisions based on workgroup comments

Reserve Staff

- Rachel Mooney, Analytical Associate
  - Protocol development lead
- Craig Ebert, President
  - Protocol development oversight
- Holly Davison, Associate Director of Programs
  - Protocol development support
- Jordan Mao, Analytical Associate
  - Protocol development support

Workgroup Members

Organization (Alphabetical)	Name
Ascend Performance Materials	Chris Johnson
Ascend Performance Materials	Brian Clancy-Jundt (Alternate)
China National Chemical Energy Conservation Center	Hanna Zhang
ClimeCo	Lauren Mechak
Futurepast	John Shideler
GHD	Yusi Li
Henan Shenma Nylon Chemical Company	Liu Wei
Henan Shenma Nylon Chemical Company	Li Xiaoye (Alternate)
Invista	Yuwen Wang
Ruby Canyon Environmental	Phillip Cunningham
Ruby Canyon Environmental	Issai Medelli (Alternate)
Sinocarbon Innovation and Investment Co., ltd	Dr. TANG Jin

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PROCESS OVERVIEW

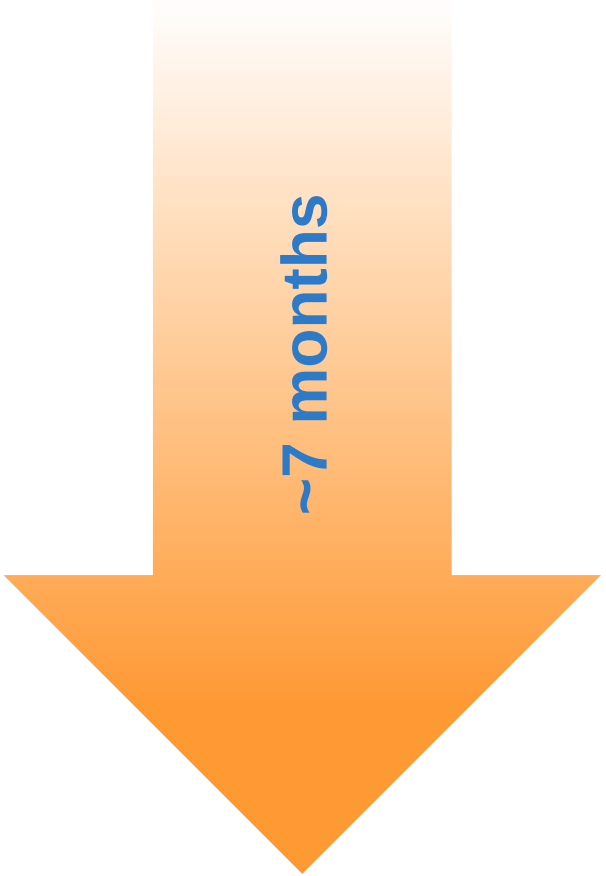
Protocol Development Overview

- **GOAL**: To create a robust China Adipic Acid Production Protocol that provides best practices for GHG accounting to generate Climate Reserve Tonnes (CRTs)
  - Climate Reserve Tonnes is the term we use for one tonne of CO2-equivalent carbon credits
  - Incentivize the destruction of nitrous oxide (N2O) in the adipic acid production process to reduce GHG emissions from adipic acid production facilities
  - Provide direct carbon finance to the adipic acid production industry in China and make abating N2O more financially attractive to investors and adipic acid production facilities
  - Adhere to high quality offset criteria and Reserve's principles
  - Leverage lessons learned from emerging technologies, other offset protocols and projects, other regulatory programs, other conservation programs
  - Solicit and incorporate expert feedback

Protocol Development Timeline

1. Kick-off meeting (*March 6, 2023*)
2. Workgroup process
   - Formation (*March 2023*)
   - Meeting 1 (*today – May 24 / 25, 2023*)
   - Meeting 2 (*June 2023 – if needed*)
3. 30-day public comment period (*July 2023*)
4. Propose to Climate Action Reserve Board of Directors

   For adoption *(October 2023)*



Timeline Process Detail

	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct
Public webinar	**6th**							
Workgroup formation								
1st workgroup meeting (webinar)								
Drafting/content development								
2nd workgroup meeting (webinar)								
Drafting/content development								
Public comment period & webinar (~30 days)								
Staff revisions based on feedback								
Internal reviews/formatting								
Deliver Board draft								
Public Board meeting								**4th**

Workgroup Process and Expectations

CAR/Process:

- Manage the protocol development process
- Hold 1-2 workgroup meetings
- Reserve staff identify and solicit feedback on specific protocol criteria
  - **Specific questions for WG will be highlighted in red**
- Reserve staff will share the draft protocol with WG
- Revise protocol based on feedback

WG/Expectations:

- Attend all (~1-2) workgroup sessions
- Be active participants: provide input and ask questions on protocol concepts and language
- After meetings, share additional input and expertise as needed
- Review draft protocol and provide written feedback to Reserve staff — **entire protocol open for feedback**
- Be constructive, collaborative, and productive

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PROTOCOL CONSIDERATIONS

Start up Testing

- The initial start-up testing is defined as a period of time between the completion of the installation or enhancement of the abatement technology and the start of the initial reporting period. The start-up testing is limited to 9 months for the purpose of testing the successful implementation of the technology. Documentation of the intent and duration of the start-up period must be presented to the verifier upon request.

Is 9 months sufficient for testing? What would the documentation look like? Other feedback?

Baseline Abatement Efficiency

- Under the Clean Development Mechanism (CDM), the 0% baseline abatement efficiency in combination with the high price for carbon offset credits, created perverse incentives.
  - Some projects were increasing adipic acid production solely for the purpose of creating more credits
- This protocol includes a mandatory 90% baseline abatement efficiency to align with international practices in the industry, i.e., any level of control below 90% does not generate any credits.
- Is this baseline by itself sufficiently rigorous to address additionality concerns, even in the cases of high offset credit prices?
  - Appendix B provides more background
  - Credit prices could exceed values used in Appendix B analysis

Defining Additionality

- Reserve is renaming “Mitigating Leakage” (under section 3) in the next draft as “Defining Additionality”
  - Discussion is mis-labelled in current draft as the focus is on additionality, not leakage
- Is there opposition to using this terminology?

Defining Additionality: Production Cap

- The protocol may require another additionality assessment to ensure that production is not increased simply for the purpose of producing more carbon credits for sale (in addition to the 90% control baseline).
  - This problem occurred years ago and seriously undermined confidence in voluntary markets
- The proposal is to limit adipic acid production levels to the current production capacity of the plant. In the U.S., this issue is dealt with by placing a production cap already established in a facility's operating permit (e.g., in a facility's Title V permit under the US Clean Air Act).
- Is there an equivalent permitting requirement in China?
- If not, what is the most appropriate alternative method for determining a production cap on a facility
  - e.g., does the facility have an established nameplate capacity or something similar that defines the upper limit on the facility's production capacity?
  - How closely is this production capacity related to current production levels?

Defining Additionality: General

- It is our understanding that China's Certified Emission Reduction Scheme (CCER), launched in 2015, has not yet been implemented. What is the status?
- Are there other ways we can address additionality?
- Are there other concerns the protocol has not addressed?

Bypass of Control Unit and Venting

- In instances when gas bypasses the N2O control unit or is directly vented to the atmosphere, and monitoring isn't present, the gas emitted to the atmosphere must be accounted for.
  - 90% baseline incentivizes PD to minimize instances of bypass or venting
- Any alternative method must meet the following criteria:
  - May only be used to account for non-N2O control unit parameters;
  - May only be used to account for rare events that represent less than **[percentage TBD]%** of total emissions in a reporting period; and
  - Methods must be conservative in nature and utilize actual flow, N2O concentration, and/or adipic acid production data from the project.
- 25% (i.e., bypassed emissions cannot exceed 25% of total emissions in the reporting period) is proposed based on HJ-75 data substitution guidelines. Is 25% an appropriate cap?

Project Monitoring: HJ 75-2017

- The protocol relies on HJ 75-2017, “Professional Standard of the People’s Republic of China, Specifications for Continuous Emissions Monitoring of SO2, NOx, and Particulate Matter in the Flue Gas Emitted from Stationary Sources,” to address monitoring and reporting requirements.
- Is this policy appropriate?
- How does it affect facility operations in terms of N2O emissions?
- Are there any initial monitoring, ongoing monitoring, and QA/QC requirements that are incorrectly described within the protocol?
- Any other general feedback on project monitoring?

Other Comments

- We received many external questions on verification and verification bodies. The Reserve is in the process of working with ANAB to identify verification bodies in the jurisdiction
  - Are there any verification bodies in China that would be interested in participating?
- Please provide other comments on the draft that we did not raise already during this meeting
  - REMINDER: The entire draft is open for discussion now, as well as during public comment

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NEXT STEPS

Next steps

- ***For Interested Stakeholders:***
  - Observers can still submit Local Engagement Form
  - Email interest to sign up for updates as an observer
  - Email us feedback anytime
- ***For Reserve:***
  - Compile notes summary on discussion
  - Post recording, notes, and presentation to the webpage
  - Incorporate feedback from workgroup discussion
  - Identify areas of focus for next workgroup meeting (if needed)
- ***For Workgroup:***
  - Email feedback on today's discussion or protocol draft review (by June 2, 2023)
  - Look out for information to schedule next meeting (if needed)

Key contacts

- ***Climate Action Reserve:***

  Protocol development lead:

  Rachel Mooney, Analytical Associate

  Email: rmooney@climateactionreserve.org

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THANK YOU!