Carbon Roadmap for Lime

NLA Sustainability Committee Meeting (via Zoom)

May 3rd, 2023

Carbon Neutrality Roadmap for Lime

Purpose

- Lay out industry carbon reduction goals
- Steps needed to satisfy goals

Roadmap Outline

1. Introduction
2. Executive Summary
3. General Commitment
4. Specific Commitments: Elements
5. What is needed for Success
6. Conclusion

3. General Commitment

- Option 1 – carbon neutrality across lime product value chain by 2050
- Option 2 – Similar commitment, but with a different target date (e.g., 2060 or 2070)
- Option 3 – Carbon neutrality by 2050 – if needed actions by others are taken

3. General Commitment (cont.)

- Option 4 – A general commitment without a specified target date (i.e., as soon as is technologically and economically feasible)
- Option 5 – Specific steps only, without a general commitment
- Option 6 – Improving efficiency by improving on product benchmarks

4. Specific Commitments: Elements

1. At the Lime Plant
    a. Energy vs Process Emissions
        i. Energy-Related Emissions
            - Fuel switching
            - Kiln efficiency
            - Heat recovery
            - Increase sale of LKD
    b. Process Emissions
        i. Innovative kiln design
        ii. CCS/CCUS (requires investment by others)

4. Specific Commitments: Elements (cont.)

2. Beyond the lime plant – offsets
    a) Investment in reforestation and similar projects
3. In the Value Chain
    a) Efficient use of lime products
    b) Recarbonization: life cycle of lime products

4. Specific Commitments: Elements (cont.)

4. What is Needed for Success
   a) Full commitment by the lime industry
   b) Effective advocacy
   c) Cooperation with suppliers and customers
   d) Stable and effective regulation and legislation
      I. Fair international trade environment
      II. Credits for early reductions and offsets
      III. Recognition process and fuel emissions are different
      IV. Investment in technology and infrastructure