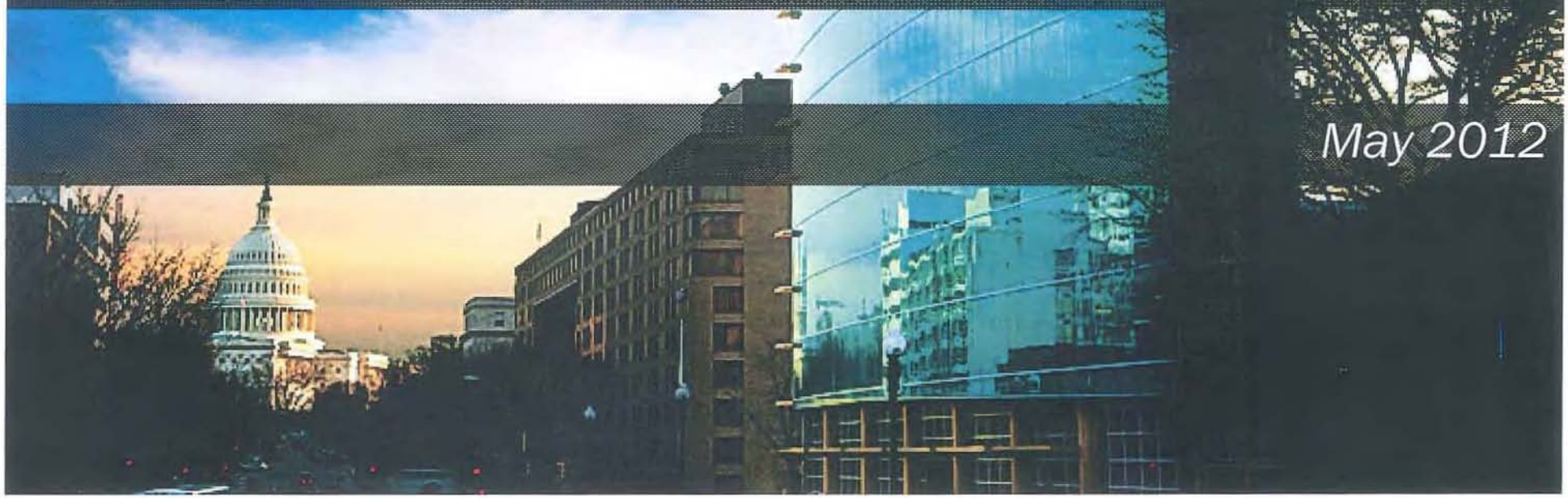
Concrete Thinking for a sustainable world

PCA Portland Cement Association

PCA Perspectives on Key Portland Cement NESHAP Issues



May 2012

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Overview

- Modification to particulate matter (PM) emission limit to address rulemaking petition
- Technology implications for PM and other pollutants associated with new PM limit
- Compliance deadline extension necessary to address technology implications
- Universe of impacted cement facilities

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Modification to PM Emission Limit

- Rulemaking petition addressing PM limit forwarded to EPA by Holcim in November 2011
- New PM data from continuous measuring devices provided to EPA
- Data indicate a significant variability in PM emissions over an extended period
- When variability is appropriately considered in PM limit calculation, emission limit is higher. (0.04 to 0.07 lbs/ton of clinker)

PM Technology Implications

- Facilities equipped with electrostatic precipitators may be able to modify, rather than replace existing units
- Facilities equipped with baghouses will confront alternative design options, likely resulting in new designs for existing units and the possibility of avoiding, in some instances, the installation of a new unit
- Exhaust fan size and design will be reconsidered as it must be coordinated with the size and design of the PM control device

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Technology Implications for Other Pollutants

- Controls to limit HCl, mercury and total hydrocarbon emissions impact PM emissions; all sorbent technologies, such as lime and carbon injection, increase particulate loading
- Differential impacts need to be factored into the design and operation of both PM and other pollutant controls
- Controls for the four pollutants must work in tandem to ensure continuous compliance

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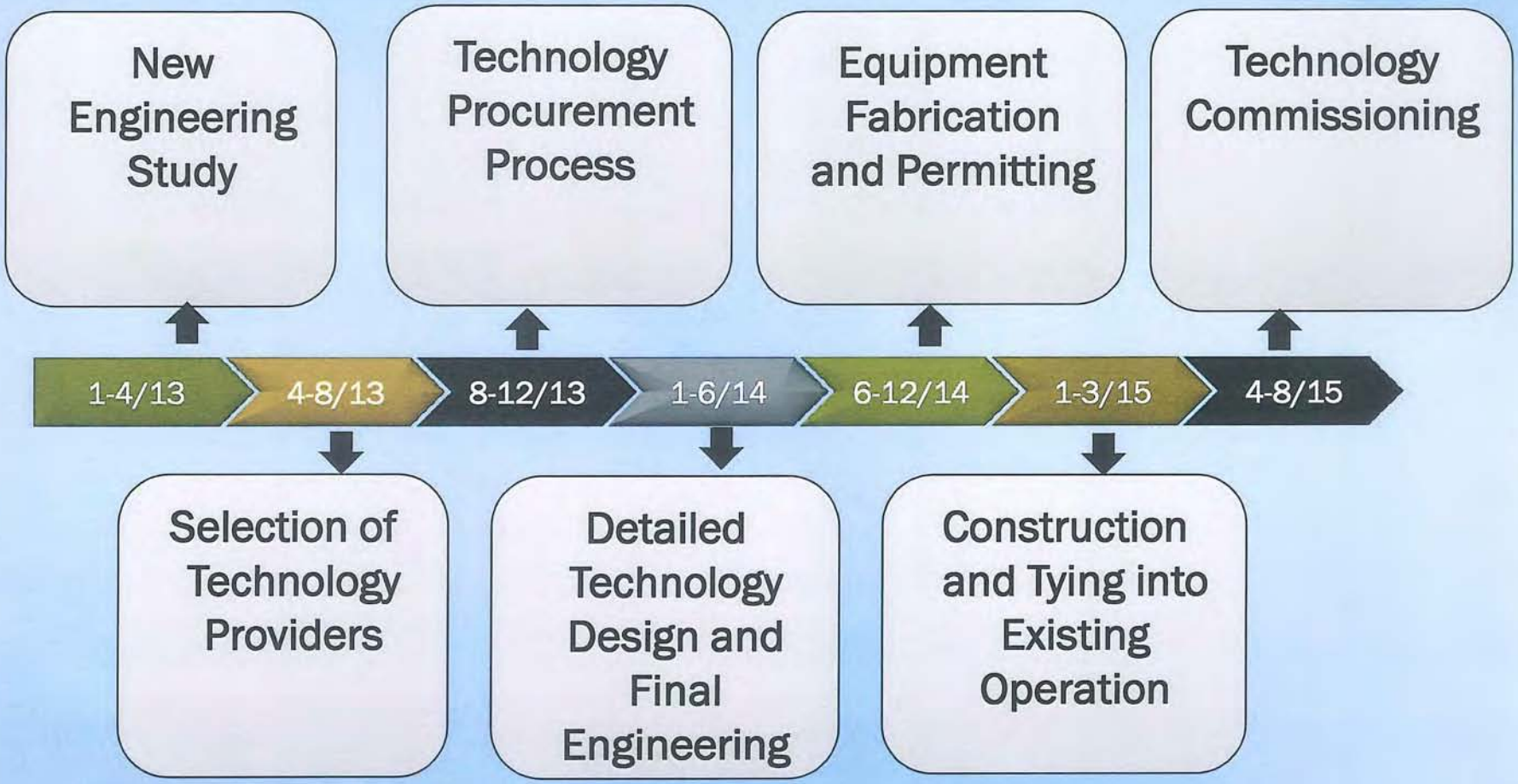
Time Needed to Prepare for Compliance



Impacted Cement Facilities

- PCA conducted a survey to determine technology implications of modified PM limit
- 18 of 23 PCA members companies provided responses
- Information collected from 92 of approximately 150 U.S. cement kilns
  - 21 kilns have electrostatic precipitators
  - 70 kilns have baghouses
  - 1 kiln has both
- 63% of kilns equipped with electrostatic precipitators will reconsider technology selections and compliance approach
- 43% of kilns equipped with baghouses will do the same
- 44% of kilns will reevaluate technology selections for other pollutants

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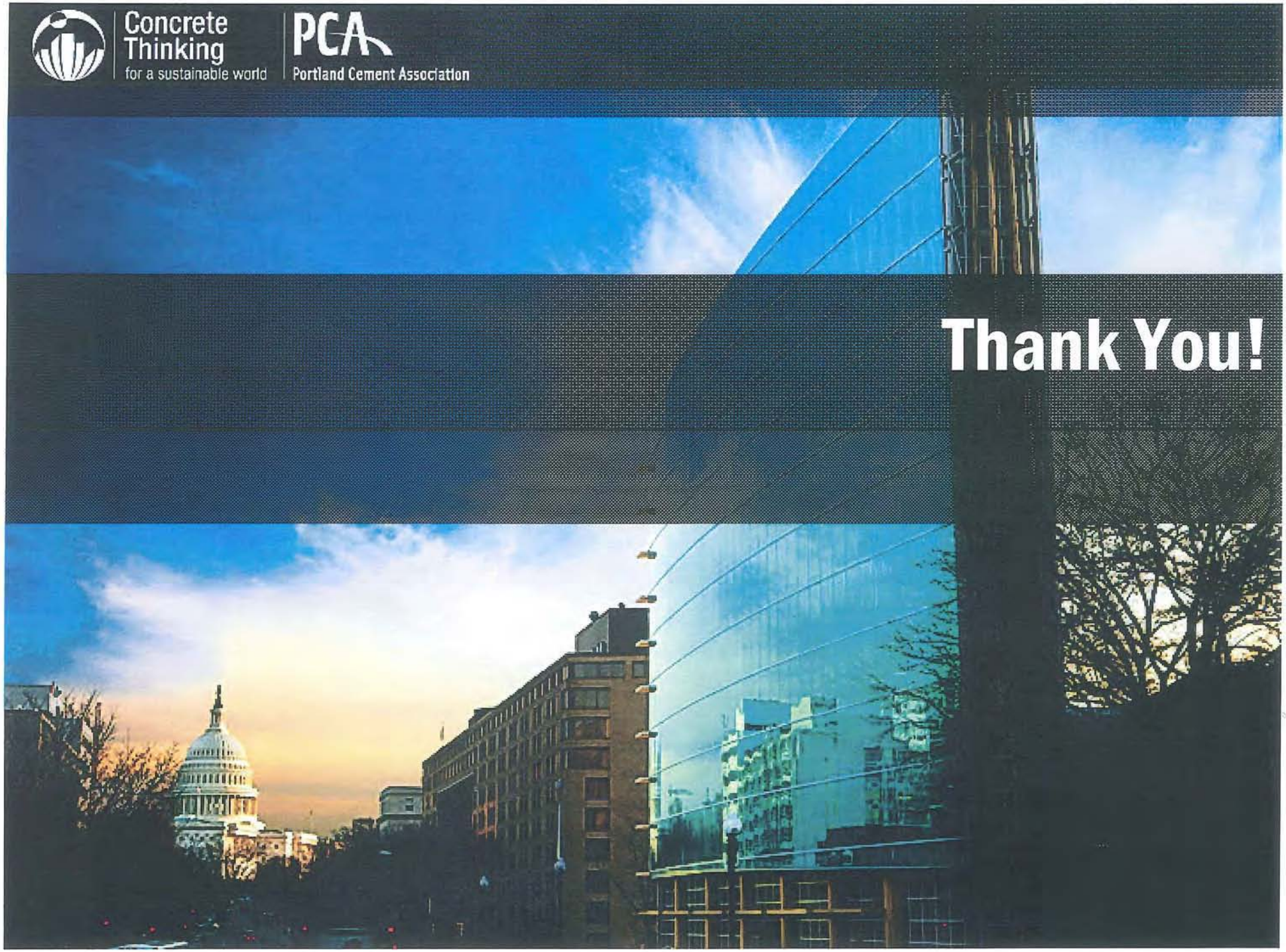

Thank You!