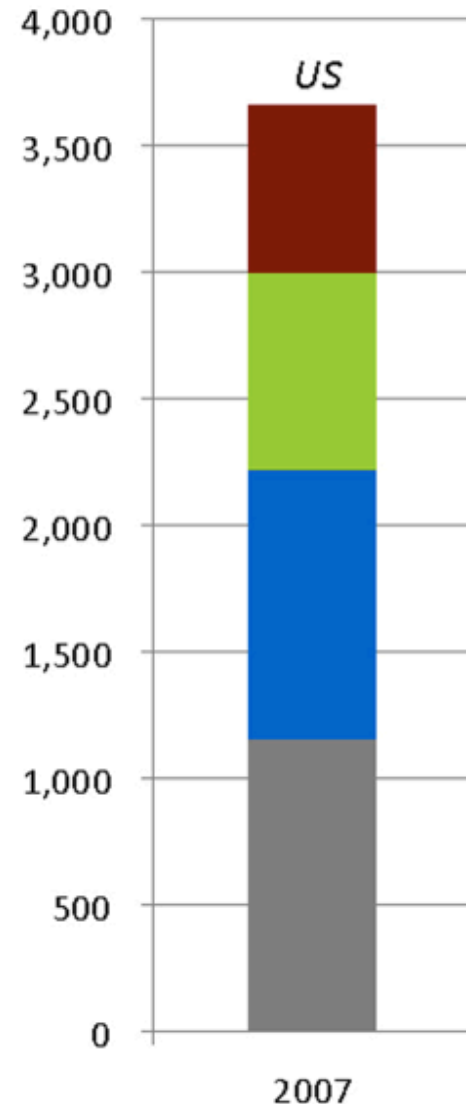
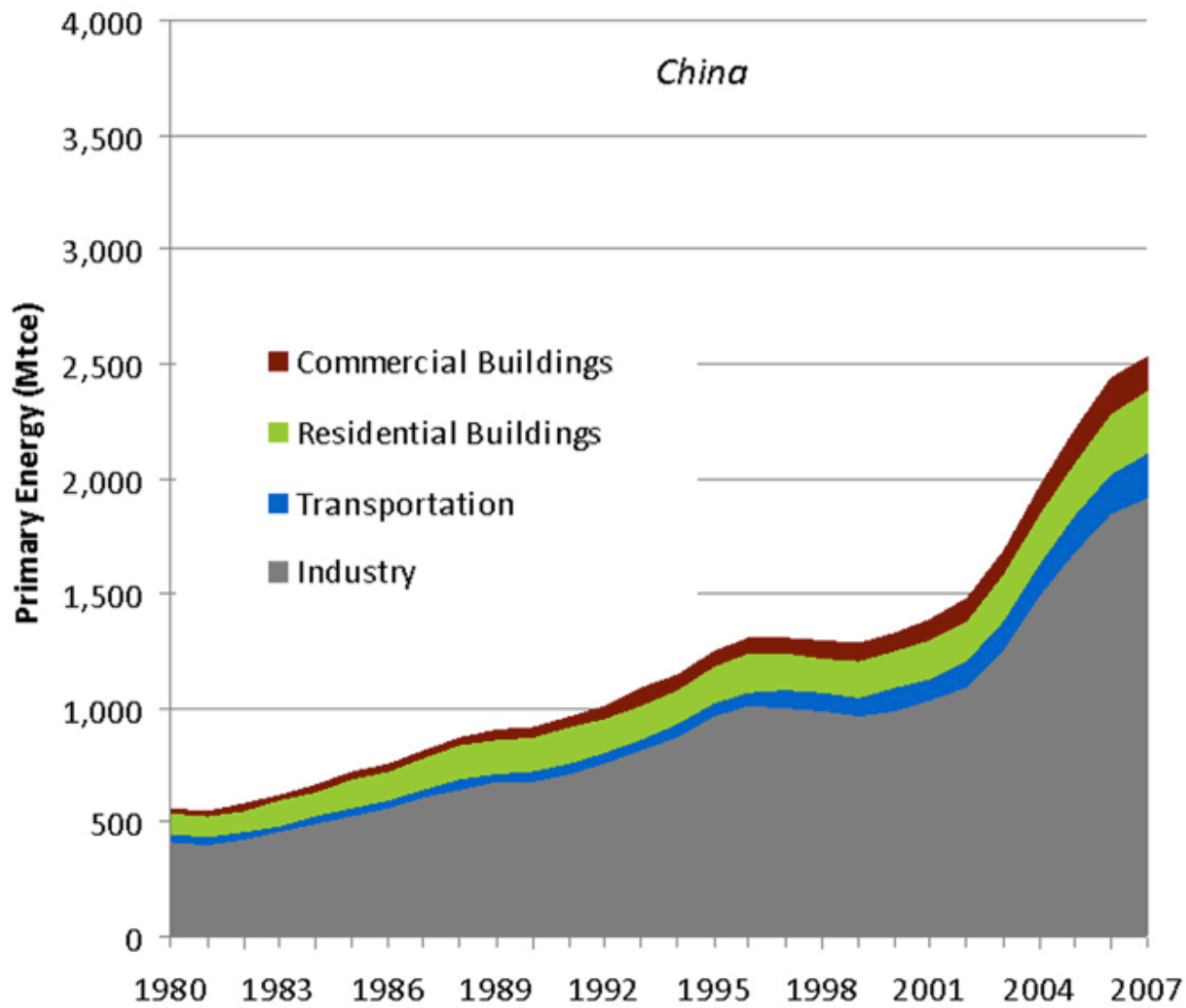




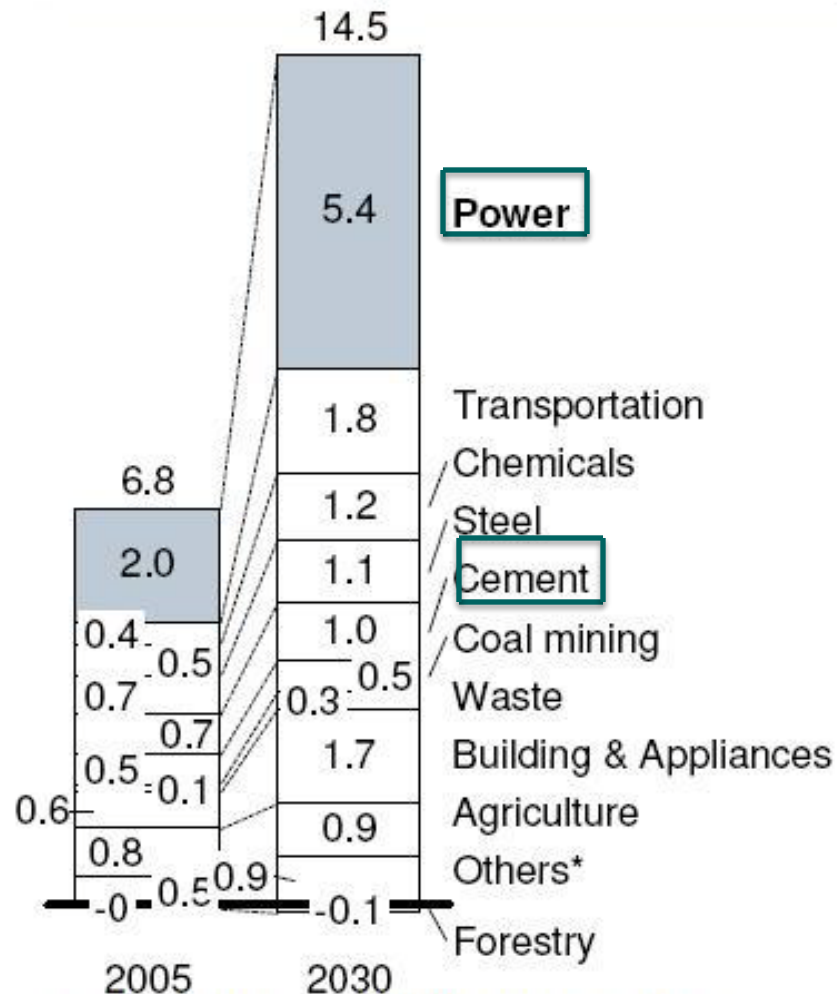
Building up capacity to support the control of sectoral GHG emission: a case study for the cement industry

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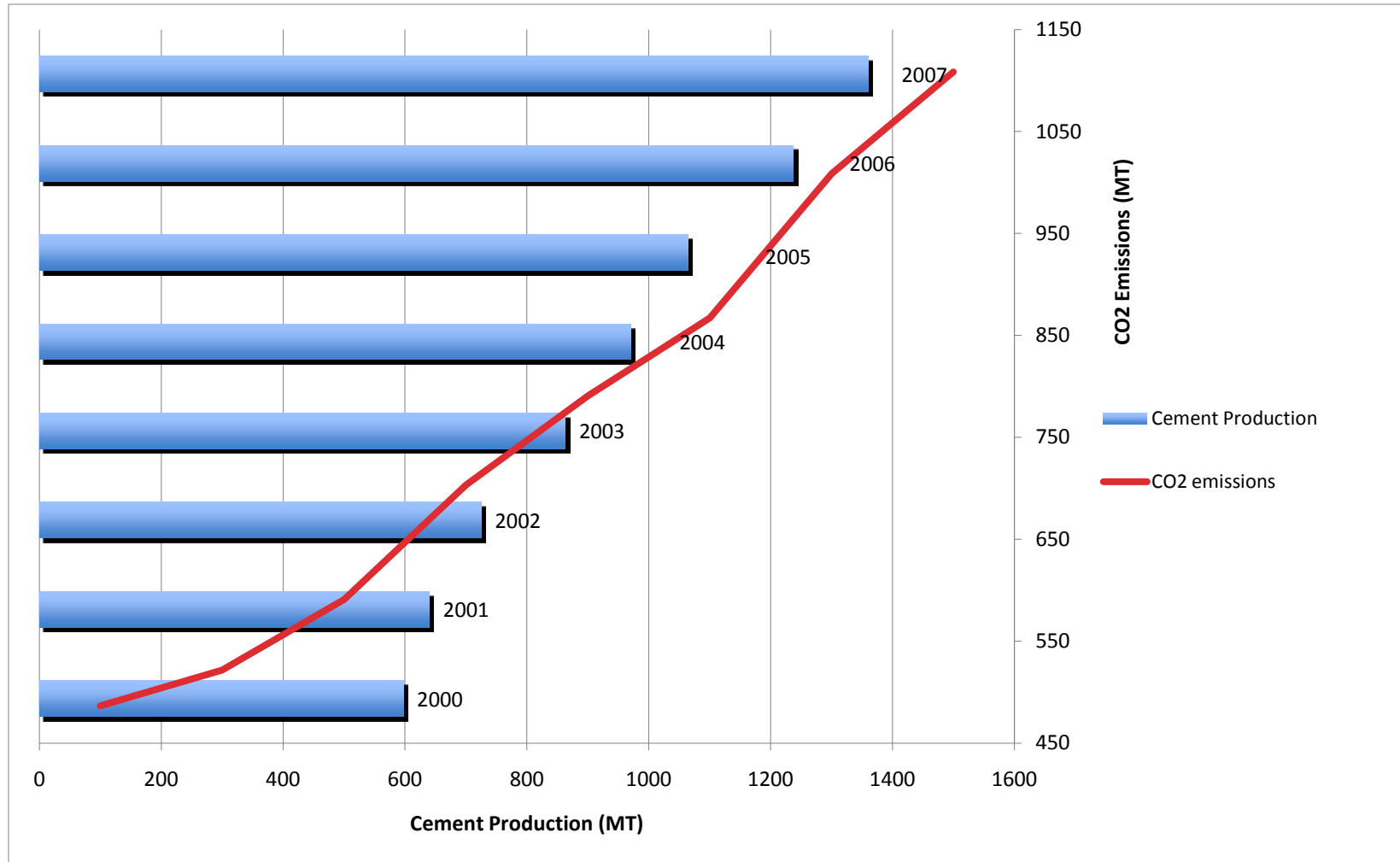


China's Baseline Emissions (Direct Emissions) Split by Sector in 2005 and 2030 GigatoneCO₂e Per Year

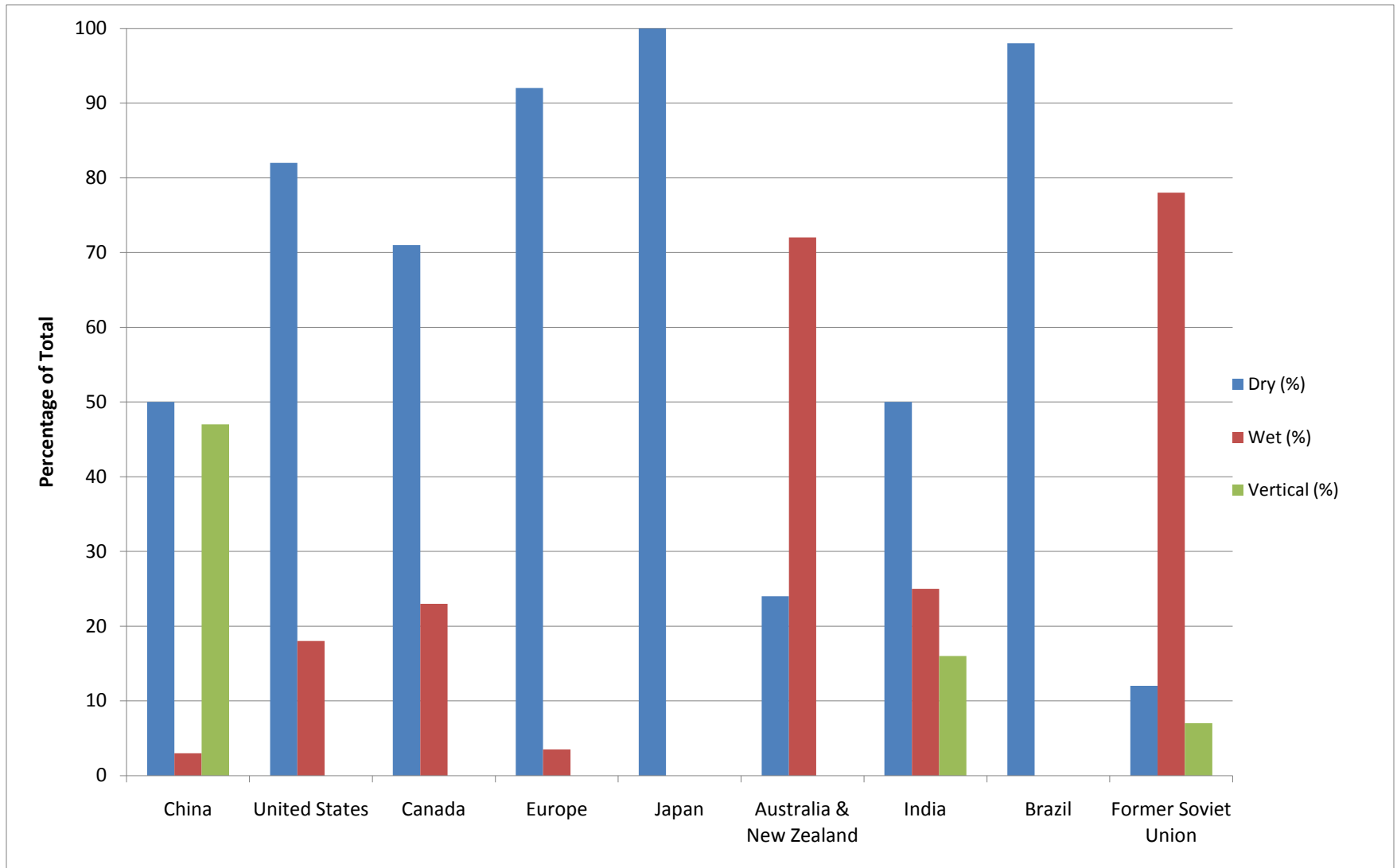


Source: Mckinsey *China's Green Revolution*

China's Cement Industry Growth



Challenges for China's Cement Industry





Chinese government policy goals:

- Reduce the no. of cement firms from 5000 to 2000
- Scale up the average production scale to 400,000 ton from 200,000 ton
- Consolidate 30 percent of industrial production to the top ten cement companies
- Increase dry-process cement manufacturing to 70 percent, up from 40 percent in 2005; Eliminate implementation of any new vertical shaft kilns

A comprehensive program through the Asia-Pacific Partnership for Clean Development-Cement Task Force (APP-CTF):

Implemented by



E3M, INC.

Supported by



- CSI CO₂ Quantification Protocol for GHG quantification
- BEST-Cement for Energy benchmarking and options assessment
- PHAST-Cement for equipment-level assessment of combustion efficiency

-
- 1. Training workshop for 42 largest cement plants and Chinese experts**
 - 2. Joint U.S.-China effort to conduct energy and greenhouse gas assessments for 3 cement plants**
 - 3. 39 more companies develop benchmark under Chinese expert assistance and develop a database managed by China Cement Association**
 - 4. Develop decision-making tools and guidelines for alternative fuels and demonstrate alternative raw materials usage in six plants**
 - 5. Document and disseminate to enhance capacity of the entire Chinese cement industry**
-

- **Improved data availability and quality**
 - **Faster technology transfer and adoption**
 - **Integrated Energy and GHG co-benefits**
-
- **Measurement improves management**
 - **Essential to have localized international accounting methodologies**
 - **Improve process emissions besides energy efficiency**



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