Key Messages

We have looked to the EPA to lead the way in clean-air regulation.

Industry has invested and created jobs in support of EPA initiatives.

We need the EPA to continue to be a global leader for clean air.
Corning Incorporated

Founded: 1851
Headquarters: Corning, New York
Employees: ~29,000 worldwide
2011 Sales: $7.9 billion
2012 Fortune 500 Rank: 328
Our core strength: glass and ceramic understanding

Display Technology
- LCD Glass Substrates
- Glass Substrates for OLED & High-Performance LCD Platforms

Telecom
- Optical Fiber & Cable
- Hardware & Equipment
  - Fiber optic connectivity products

Environmental Technologies
- Emissions Control Products
  - Light-duty gasoline vehicles
  - Light-duty and heavy-duty on-road diesel vehicles
  - Heavy-duty non-road diesel vehicles
  - Stationary

Life Sciences
- Cell Culture & Bioprocess
- Assay & High-Throughput Screening
- Genomics & Proteomics
- General Laboratory Products

Specialty Materials
- Corning® Gorilla® Glass
- Display Optics & Components
- Optical Materials
- Optics
- Aerospace & Defense
- Ophthalmic
160-year history of breakthrough technologies

- **1879** Glass envelope for Thomas Edison’s light bulb
- **1915** Pyrex® glass
- **1934** Dow Corning silicones
- **1947** Process for TV bulbs
- **1952** Glass ceramics
- **1964** Fusion process
- **1970** First low-loss optical fiber
- **1972** Ceramic substrates for catalytic converters
- **1974** Fusion process
- **1982** LCD glass
- **2006** Environmentally friendly LCD glass
- **2007** Gorilla® Glass
- **2006** Ultra-bendable optical fiber
The need for cleaner air

Los Angeles, California: 1970

1970
U.S. Congress passes Clean Air Act

1971
Corning invents extrusion

1973
Corning invents cordierite; Builds first U.S. factory

1974
First commercial shipment of Corning substrates

1975
~ 3 million substrates on new U.S. autos
Mobile emissions control products have prevented

4 billion tons of hydrocarbons

4 billion tons of nitrogen oxides

40 billion tons of carbon monoxide

from entering the air we breathe.
Awarded 2003 National Medal of Technology

"For their pioneering work resulting in the design and manufacture of the cellular ceramic substrate for catalytic converters that enabled auto manufacturers to develop the first commercially mass-produced automotive catalytic converter."

Ronald Lewis, President George W. Bush, Dr. Irwin Lachman, and Dr. Rodney Bagley
How Corning makes cleaner air possible

Corning® Celcor® flow-through substrates for gasoline & diesel vehicles
How Corning makes cleaner air possible

Corning® Celcor® flow-through substrates for gasoline & diesel vehicles
How Corning makes cleaner air possible

Corning® Celcor® flow-through substrates for gasoline & diesel vehicles

Corning® DuraTrap® particulate filters for diesel vehicles
How Corning makes cleaner air possible

Corning® Celcor® flow-through substrates for gasoline & diesel vehicles

Corning® DuraTrap® particulate filters for diesel vehicles
U.S. initiative becomes worldwide phenomenon

1975
Tightening regulations bring opportunity

2010

N.A.  Europe  Japan Korea  India Russia Brazil & ROW  China
Another wave approaching

N.A.  Europe  Japan Korea  India Russia Brazil & ROW  China

2017
Impact: High-value manufacturing & technology jobs

Source: MECA membership
Investment cycle: Vision to regulatory implementation

Regulation Development

Technology Adoption

- Research & Development
- Engineering & Manufacturing
- Early Production
- General Use
- IN-USE REGULATION
- Obsolescence & Replacement

2009  2010  2014  2016  2025
Regulations push societal benefits to higher plateaus
Air quality around the world is still an issue

Delhi, India

Jakarta, Indonesia

Santiago, Chile

Cairo, Egypt

Shanghai, China
EPA leadership can continue to guide global progress

• First-class research in technology and regulatory impact

• First-class regulatory innovation

• Courageous implementation has successfully challenged industry to the betterment of everyone
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