IGU Study on Urban Air Quality: Enhancing and Saving Human Lives

Switch to Natural Gas Helps Mega-Cities Dramatically Improve Air Quality and Reduce Emissions of GHG and Air Pollutants
Air quality levels – A global issue
(8 am EST 2016 06 24)
Natural Gas. An agent of change in the fight against urban air pollution

Outdoor air pollution is among the most significant environmental threats to human health:

- **3.7m** premature deaths each year (WHO)
- **by 2050** deaths from outdoor air pollution will double from current levels by 2050 absent policy changes (OECD)

More natural gas = fewer pollutants and CO₂ emissions

**Sources:**
- EPA, AF-42 Compilation of Air Pollutant Emission Factors, Center for Air Quality
- Emissions Inventory Enhancement Project - Final report 2011

**Four global mega cities are taking action:***
- **NEW YORK:**
  - 2007: Banning New York City’s use of high-sulfur fuel burning in buildings to cleaner fuels.
- **ISTANBUL:**
  - 2011: Annual average concentration of SO₂ at 50%.
- **TORONTO:**
  - 2004: 1,700 premature deaths & 4,000 hospitalizations per year.
  - 2009–2014: Down 50% & NOX emissions down 90%.
  - 2013–2014: Average PM2.5 levels more than 10x US-China WHO recommended levels.
- **BEIJING:**
  - Early 2013: Beijing’s four coal power plants to shut down in 2016 and replaced with fixed low-natural gas power plants with 2x greater capacity.

**NATURAL GAS: IMPROVING THE AIR WE BREATHE**
Conclusion: Gas as the positive change agent

Enhanced use of natural gas in energy generation, heating and industry will drastically reduce emissions, mercury and particulate matter, thereby providing enhanced quality of life for virtually everyone in urban society.

We support policies that reduce GHG emissions and emissions of health damaging air pollutants such as:

- Improvement of end-use energy efficiency
- Increases in combustion efficiency
- Encouragement of fuel switching
- Increased use of non-combustion renewable energies

![Figure 1: Comparison of Emissions from Different Fuels](source: EPA AP-42 Compilation of Air Pollutant Emission Factors; CentSARA Area Combustion Emissions Inventory Enhancement Project – Final Report 2011)
Thank you