Multi-pollutant, Sector-based Approaches to Air Pollution Control

Work Group Update

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Summary

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Work Group Purpose and Objectives

Provide information and advice to EPA regarding opportunities and challenges for advancing sector-based, multi-pollutant approaches to air pollution control in major U.S. industries.

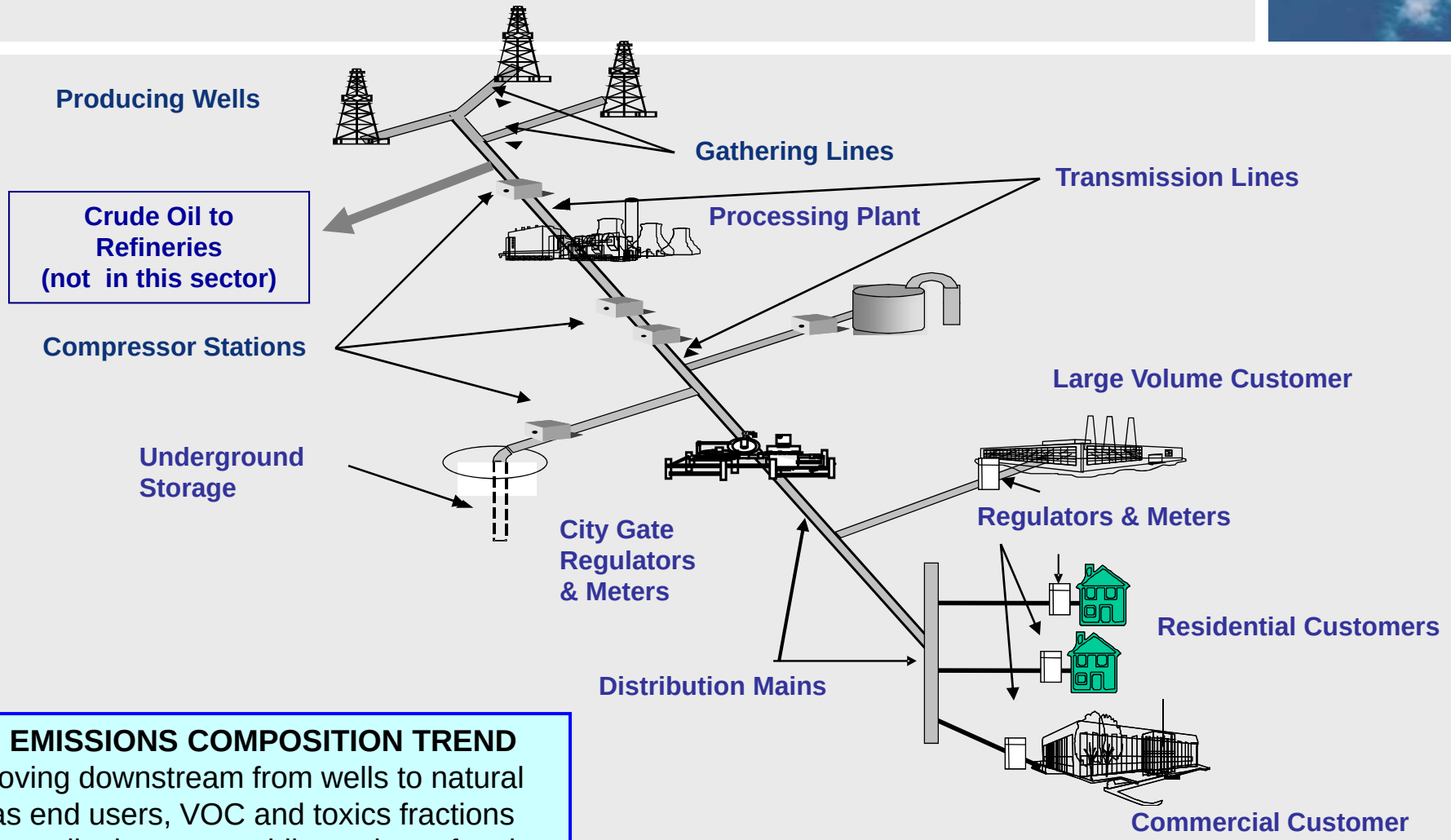
Work Group History

- Work Group proposed and discussed at May 2010 CAAAC meeting
- Work Group launched and members solicited at October 2010 CAAAC meeting
- Series of 4 conference calls held in November and December 2010 to discuss Work Group charter, roundtable approach, and sector background info
- Work Group meeting on January 10 to inform roundtable planning:
  - Related policy developments: risk and technology reviews; energy efficiency & GHG

Sector Roundtable Discussions

- Conduct a series of 1-day roundtable discussions focused on the following sectors:
  - Iron and steel
  - Oil and gas production
  - Chemical manufacturing
- Roundtables discussions will involve:
  - Work Group members
  - Other interested CAAAC members
  - Representatives from 2 companies in the sector

Oil & Gas Production Sector



EMISSIONS COMPOSITION TREND

Moving downstream from wells to natural gas end users, VOC and toxics fractions generally decrease, while methane fraction increases to about 95%

Source: Adapted from American Gas Association and EPA Natural Gas STAR Program

Iron and Steel Sector

Sector covers 3 main types of plants:

- Integrated Iron and Steel Plants
  - 18 facilities – some with co-located EAF and coke plants
- Electric Arc Furnaces (EAF)
  - 95 facilities – from 1 to 4 EAF per facility (1 to 2 typical)
- Coke Oven Plants
  - Most have multiple coke oven batteries
  - 19 facilities
    - 8 “Captive” – co-located at a steel manufacturing facility
    - 11 “Merchant” – manufacture and sell coke to other facilities

Roundtable Topics

- Overarching questions include:
  - How might a sector-based, multi-pollutant strategy optimize the reduction of air pollution for the sector?
  - What might optimization look like when considered in terms of emissions reduction, risk and impacts reduction, environmental justice, cost reduction, certainty, and operational and compliance flexibility?
- Topic areas include:
  - Coordination of stationary source air pollution control regulations
  - Advanced air pollution control technology
  - Integrating energy efficiency into air pollution control practices
  - Environmental and community considerations

Roundtable Topics

- Coordination of stationary source air pollution control regulations
  - How could air pollution regulation (NSPS, NESHAPS, NAAQS, NSR, etc.) be better coordinated in the industrial sector?
  - How could record keeping, monitoring and reporting requirements of various regulations be harmonized in a sector approach?
  - What are the best ways to group emissions sources in the sector for the purpose of coordinated regulation and emissions control?
  - What are the benefits and disbenefits of increased regulatory coordination and/or a sector approach?
  - What are the regulatory and legal challenges to implementing alternative sector-based approaches?

Roundtable Topics

- Advanced air pollution control technology
  - Which advanced technologies (process and/or emissions control) will assist in controlling multiple types of air pollution for the sector?
  - What are the benefits and implications of adopting these technologies in the sector?
  - What are the roles of emission monitoring technologies and policies in facilitating multi-pollutant sector approaches?
  - Are there steps that can be taken to support more rapid technology adoption and equipment replacement?

Roundtable Topics

- Integrating energy efficiency into air pollution control practices
  - What is the interaction between energy utilization and efficiency efforts and conventional air pollution control strategies?
  - Would different regulatory strategies help increase energy efficiency or reduce fuel consumption and achieve greater emissions reductions?

Roundtable Topics

- Environmental and community considerations

  - Will multi-pollutant, sector-based approaches result in an improved facility environmental performance?

  - Will multi-pollutant, sector-based approaches advance the consideration and reduction of cumulative health risks?

  - Which policies and regulations in particular have the best chance of producing additional “co-benefits”?

  - Will these approaches advance environmental protection efforts of Tribal, local, and state governments? Are they implementable?

Early Observations

- Strong interest persists in multi-pollutant, sector approaches
- Familiar questions have surfaced regarding new approaches to environmental policies: emissions, risk, disproportionate impacts, cost, flexibility, beyond compliance
- Sector-based, multi-pollutant approaches offer a fresh look at specific sectors
- Changes in technology, understandings of risk, and regulatory development tools could improve environmental results with less resources

Next Steps

- Develop agendas for Clean Air Roundtable discussions
- Conduct Roundtables in February-March 2011
- Assess results and draft Work Group Report: April-May 2011
- Report and discuss findings with Clean Air Act Advisory Committee: June 2011,