Non-CO$_2$ Greenhouse Gases: Methane

Source/Sectors: Natural Gas Systems (Distribution)

Technology: Electronic monitoring at large surface facilities (A.1.2.4.1)

Description of the Technology:
Distribution pipelines take the high-pressure gas from the natural gas transmission systems to individual end-users. There were over one million miles of distribution mains in the United States. Distribution system emissions result mainly from fugitive emissions from gate stations and non-plastic piping.

To ensure that both peak and non-peak operating pressures are met; natural gas distribution systems typically operate at gas pressures that are higher than necessary. Use of electronic monitoring can match the distribution system pressure with real time demand and, thus, reduce methane emission (USEPA, 2004; IEA, 2003).

Effectiveness: Good

Implementability: Good

Reliability: Good

Maturity: Good

Environmental Benefits: It reduces methane emissions.

Cost Effectiveness:

<table>
<thead>
<tr>
<th>Technology</th>
<th>Lifetime (yrs)</th>
<th>MP (%)</th>
<th>RE (%)</th>
<th>TA (%)</th>
<th>Capital cost</th>
<th>Annual cost</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic monitoring at large surface facilities$^1$</td>
<td>5</td>
<td>100</td>
<td>95</td>
<td>6</td>
<td>$28.07</td>
<td>$4.68</td>
<td>$11.37</td>
</tr>
</tbody>
</table>

Note: MP: market penetration; RE: reduction efficiency; TA: technical applicability; costs are in year 2000 US$/MT$_{CO2-eq.}$


Industry Acceptance Level: Good

Limitations: None reported.

Sources of Information:


