

# ATTACHMENT I

El Paso Natural Gas Company, LLC

Caprock Compressor Station - 50 ppmc Nox limiting factor

---

|                              |                |       |
|------------------------------|----------------|-------|
| <b>Turbine Cost Analysis</b> | Interest Rate: | 3.25% |
| <b>All Units</b>             | Period (yrs):  | 20    |

**Cost Effectiveness Summary using Stack Test Data Emission Factors**

| Control Equipment                   | Unit | SCR Capital Cost | Building Modification | Total Annual Cost* | Emission Reduction | Cost Effectiveness |
|-------------------------------------|------|------------------|-----------------------|--------------------|--------------------|--------------------|
|                                     |      | (\$)             | (\$)                  | (\$)               | (tpy)              | (\$/ton)           |
| Selective Catalytic Reduction (SCR) | A-01 | 7,180,921        | -                     | 612,350            | 7.6                | 80,398             |
|                                     | A-02 | 11,430,361       | -                     | 914,265            | 16.6               | 54,935             |

\* Total Annual Cost includes the annualized capital cost as well as the direct and indirect annual operating costs.

# El Paso Natural Gas Company, LLC

## Caprock Compressor Station - 50 ppmc Nox limiting factor

|                                 |                     |                                                                                               |                                              |
|---------------------------------|---------------------|-----------------------------------------------------------------------------------------------|----------------------------------------------|
| <b>GE Model M3712R Turbine</b>  |                     | Interest Rate:                                                                                | 3.25% <-- EPA Default Interest Rate          |
| <b>A-01</b>                     |                     | Period (yrs):                                                                                 | 20 <-- EPA Air Pollution Control Cost Manual |
| <b>Base Case</b>                |                     |                                                                                               |                                              |
| NO <sub>x</sub> lb/hr:          | 34.35 lb/hr         | <-- Sept. 29, 2020 portable analyzer stack test result (permit limit is 45.9 lb/hr)           |                                              |
| NO <sub>x</sub> tpy:            | 11.51 tpy           | <-- Calculated 9/29/2000 stack test results and 2018 through 2020 avg actual operating hours. |                                              |
| <b>SCR</b>                      |                     |                                                                                               |                                              |
| NO <sub>x</sub> Reduction:      | 66.2%               | <-- Reach the 50 ppmc Nox limit                                                               |                                              |
| NO <sub>x</sub> lb/hr:          | 11.62 lb/hr         | <-- Based on reaching the 50 ppmc Nox limit (estimated from 1994 emission test)               |                                              |
| NO <sub>x</sub> tpy:            | 3.89 tpy            | <-- Expected annually NOx emissions (ton/yr) after SCR                                        |                                              |
| Turbine Housing Reconfiguration | \$ -                | <-- Presumed to be included in CE2107005 shown below (Emission Controls CWIP)                 |                                              |
| SCR Capital Investment          | \$ 7,180,921        | <-- CE2107005 Caprock internal est 07/16/2021                                                 |                                              |
| Total Capital Investment        | \$ 7,180,921        |                                                                                               |                                              |
| Annualized TCI:                 | \$ 493,896          | <-- Based on interest rate, year and TCI                                                      |                                              |
| Annual O&M Costs:               | \$ 118,454          | <-- EPA Cost Control Spreadsheet                                                              |                                              |
| Total Annual Costs:             | \$ 612,350          |                                                                                               |                                              |
| Emissions Reduction:            | 7.6 tpy             |                                                                                               |                                              |
| <b>Cost Effectiveness:</b>      | <b>\$ 80,398.40</b> | <b>\$/ton</b>                                                                                 |                                              |

# El Paso Natural Gas Company, LLC

## Caprock Compressor Station - 50 ppmc Nox limiting factor

|                                 |               |                                                                                              |                                              |
|---------------------------------|---------------|----------------------------------------------------------------------------------------------|----------------------------------------------|
| GE Model M3712R Turbine         |               | Interest Rate:                                                                               | 3.25%                                        |
| A-02                            |               | Period (yrs):                                                                                | 20 <-- EPA Air Pollution Control Cost Manual |
| Base Case                       |               |                                                                                              |                                              |
| NO <sub>x</sub> lb/hr:          | 16.83 lb/hr   | <-- highest most recent test 9/29/2000 portable analyzer                                     |                                              |
| NO <sub>x</sub> tpy:            | 29.64 tpy     | <-- Calculated using 2018 through 2020 average actual operating hours and 9/29/2000 results. |                                              |
| SCR                             |               |                                                                                              |                                              |
| NO <sub>x</sub> Reduction:      | 56%           | <-- Reach the 50 ppmc Nox limit                                                              |                                              |
| NO <sub>x</sub> lb/hr:          | 7.38 lb/hr    | <-- Based on reaching the 50 ppmc Nox limit (estimated from 1994 emission test)              |                                              |
| NO <sub>x</sub> tpy:            | 13.00 tpy     | <-- Expected annually NOx emissions (ton/yr) after SCR                                       |                                              |
| Turbine Housing Reconfiguration | \$ -          | <-- Presumed to be included in CE2107005 shown below                                         |                                              |
| SCR Capital Investment          | \$ 11,430,361 | <-- CE2107005 Caprock internal est 07/16/2021 (Emission CWIP+ Regen CWIP +Regeneration)      |                                              |
| Total Capital Investment        | \$ 11,430,361 |                                                                                              |                                              |
| Annualized TCI:                 | \$ 786,167    | <-- Based on interest rate, year and TCI                                                     |                                              |
| Annual O&M Costs:               | \$ 128,097    | <-- EPA Cost Control Spreadsheet                                                             |                                              |
| Total Annual Costs:             | \$ 914,265    |                                                                                              |                                              |
| Emissions Reduction:            | 16.6 tpy      |                                                                                              |                                              |
| Cost Effectiveness:             | \$ 54,935.11  | \$/ton                                                                                       |                                              |

Caprock CS

**Op Hour Comparison**

| Operating Hours Per Year      |               |                 |
|-------------------------------|---------------|-----------------|
| Yr/Unit                       | A-01          | A-02            |
| 2018                          | -             | 138.00          |
| 2019                          | 2.50          | 3,347.00        |
| 2020                          | 2,008.00      | 7,081.75        |
| <b>2018 – 2020 Avg. Hours</b> | <b>670.17</b> | <b>3,522.25</b> |

**Fuel Consumption**

| Fuel Consumption Per Year (MMSCF) |              |               |
|-----------------------------------|--------------|---------------|
| Yr/Unit                           | A-01         | A-02          |
| 2018                              | -            | 6.94          |
| 2019                              | 0.19         | 215.97        |
| 2020                              | 130.82       | 353.30        |
| <b>2018 – 2020 Avg. Hours</b>     | <b>43.67</b> | <b>192.07</b> |

Total  
#VALUE!  
#VALUE!  
484.12