

### Design Day Demand Allocator

| Empire District Gas Company<br>Development of Demand Allocator |    | Total<br>Company | Residential<br>Service<br>RS | Small Com. Firm<br>Service - Small<br>SCFS | Small Com. Firm<br>Service - Med<br>SCFM | Small Com. Firm<br>Service - Large<br>SCFL | Large<br>Volume<br>LV | Small Com. Firm<br>TR Service - Small<br>SVFTS | Small Com. Firm<br>TR Service - Med<br>SVFTM | Small Com. Firm<br>TR Service - Large<br>SVFTL | Large Volume<br>TR Service<br>LVFT |
|--|----|------------------|------------------------------|--|--|--|-----------------------|--|--|--|------------------------------------|
| R-Square   |    |                  | 93.2%                        | 92.9%                                      | 94.5%                                    | 78.9%                                      | 76.1%                 | 93.5%  | 93.6%  | 92.8%  | 95.4%                              |
| Heat use per DD (coefficient)                                  |    |                  | 0.093                        | 0.206                                      | 0.994                                    | 2.532                                      | 3.623                 | 0.313  | 1.180  | 2.807  | 25.947                             |
| Heat use at Design Day DD                                      | 81 |                  | 7.52                         | 16.65                                      | 80.54                                    | 205.07                                     | 293.47                | 25.34  | 95.61  | 227.37   | 2,101.69                           |
| Base use at Design Day   |    |                  | 0.29                         | 0.66                                       | 6.89                                     | 27.02                                      | 206.17                | 1.51   | 6.22   | 15.01  | 1,101.99                           |
| Total use at Design Day  |    |                  | 7.80                         | 17.32                                      | 87.42                                    | 232.09                                     | 499.64                | 26.85  | 101.84                                       | 242.38   | 3,203.69                           |
| Design Day Customers   |    | 44,084           | 38,508                       | 4,698                                      | 392                                      | 32   | 24                    | 105  | 197  | 65   | 63                                 |
| Design Day Use (CCF)   |    | 675,982          | 300,471                      | 81,355                                     | 34,270                                   | 7,427                                      | 11,991                | 2,819  | 20,062                                       | 15,755   | 201,832                            |
| Design Day Use (%)   |    | 100.00%          | 44.45%                       | 12.04%                                     | 5.07%                                    | 1.10%                                      | 1.77%                 | 0.42%  | 2.97%  | 2.33%  | 29.86%                             |

### Results of Regression Analysis

| Regression Analysis        |  | Residential<br>Service<br>RS | Small Com. Firm<br>Service - Small<br>SCFS | Small Com. Firm<br>Service - Med<br>SCFM | Small Com. Firm<br>Service - Large<br>SCFL | Large<br>Volume<br>LV | Small Com. Firm<br>TR Service - Small<br>SVFTS | Small Com. Firm<br>TR Service - Med<br>SVFTM | Small Com. Firm<br>TR Service - Large<br>SVFTL | Large Volume<br>TR Service<br>LVFT |
|----------------------------|--|------------------------------|--|--|--|-----------------------|--|--|--|------------------------------------|
| Coefficient                |  | 0.09279                      | 0.20558                                    | 0.99427                                  | 2.53170                                    | 3.62305               | 0.31285  | 1.18041                                      | 2.80698  | 25.94682                           |
| Coefficient Standard Error |  | 0.00753                      | 0.01708                                    | 0.07253                                  | 0.39522                                    | 0.61145               | 0.02479  | 0.09315                                      | 0.23502  | 1.70914                            |
| R-Squared                  |  | 93.24%                       | 92.95%                                     | 94.47%                                   | 78.86%                                     | 76.14%                | 93.54%   | 93.59%                                       | 92.84%   | 95.44%                             |
| t-stat                     |  | 12.32                        | 12.04                                      | 13.71                                    | 6.41                                       | 5.93                  | 12.62  | 12.67  | 11.94  | 15.18                              |

Workpapers

| Empire District Gas Company             |           |            |            |           |           |           |           |           |           |           |           |           |            |
|---|-----------|------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| 12ME Dec 31, 2020                       |           |            |            |           |           |           |           |           |           |           |           |           |            |
|   | Jan '20   | Feb '20    | Mar '20    | Apr '20   | May '20   | Jun '20   | Jul '20   | Aug '20   | Sep '20   | Oct '20   | Nov '20   | Dec '20   | Average    |
| <b>Actual Bills</b>                     |           |            |            |           |           |           |           |           |           |           |           |           |            |
| RS                                      | 38,373    | 38,508     | 38,614     | 38,621    | 38,437    | 38,446    | 38,505    | 38,282    | 38,509    | 38,150    | 37,950    | 38,909    | 38,442     |
| SCFS                                    | 4,689     | 4,698      | 4,719      | 4,719     | 4,702     | 4,690     | 4,681     | 4,662     | 4,677     | 4,678     | 4,671     | 4,760     | 4,696      |
| SCFM                                    | 391       | 392        | 395        | 396       | 393       | 398       | 396       | 395       | 395       | 397       | 393       | 404       | 395        |
| SCFL                                    | 31        | 32         | 32         | 32        | 32        | 31        | 33        | 34        | 34        | 33        | 37        | 35        | 33         |
| LV                                      | 25        | 24         | 24         | 24        | 24        | 24        | 25        | 23        | 23        | 24        | 23        | 22        | 24         |
| SVFTS                                   | 105       | 105        | 105        | 104       | 104       | 104       | 104       | 104       | 104       | 104       | 104       | 104       | 104        |
| SVFTM                                   | 199       | 197        | 197        | 198       | 197       | 197       | 197       | 200       | 196       | 198       | 194       | 194       | 197        |
| SVFTL                                   | 61        | 65         | 59         | 59        | 59        | 59        | 60        | 61        | 58        | 58        | 57        | 58        | 60         |
| LVFT                                    | 64        | 63         | 65         | 64        | 64        | 63        | 65        | 66        | 65        | 65        | 65        | 64        | 64         |
| Total                                   | 43,938    | 44,084     | 44,210     | 44,217    | 44,012    | 44,012    | 44,066    | 43,827    | 44,061    | 43,702    | 43,494    | 44,550    | 44,014     |
| <b>Actual Sales (CCF)</b>               |           |            |            |           |           |           |           |           |           |           |           |           |            |
| RS                                      | 3,832,291 | 4,717,899  | 4,300,428  | 2,737,367 | 1,707,565 | 818,164   | 354,279   | 331,886   | 329,544   | 381,550   | 1,405,799 | 2,160,349 | 23,077,121 |
| SCFS                                    | 1,044,400 | 1,330,792  | 1,209,411  | 693,338   | 359,402   | 173,472   | 101,683   | 89,137    | 97,143    | 212,246   | 360,890   | 522,545   | 6,194,459  |
| SCFM                                    | 475,431   | 555,547    | 526,377    | 327,954   | 186,484   | 110,242   | 82,449    | 81,009    | 84,182    | 118,911   | 208,731   | 275,599   | 3,032,916  |
| SCFL                                    | 100,804   | 115,513    | 104,554    | 70,357    | 42,302    | 24,541    | 51,272    | 32,120    | 23,010    | 125,565   | 90,789    | 65,552    | 846,380    |
| LV                                      | 186,286   | 267,685    | 285,500    | 227,866   | 154,636   | 131,258   | 145,996   | 151,820   | 132,698   | 116,113   | 187,583   | 167,268   | 2,154,708  |
| SVFTS                                   | 36,333    | 45,251     | 41,295     | 27,740    | 14,883    | 7,614     | 4,882     | 4,522     | 5,088     | 6,142     | 13,743    | 22,042    | 229,544    |
| SVFTM                                   | 269,587   | 323,436    | 296,086    | 197,839   | 101,681   | 58,014    | 37,356    | 36,754    | 39,490    | 42,373    | 99,163    | 155,721   | 1,657,501  |
| SVFTL                                   | 186,886   | 251,630    | 209,281    | 143,080   | 106,059   | 48,024    | 34,446    | 24,138    | 29,296    | 39,973    | 81,758    | 106,705   | 1,261,277  |
| LVFT                                    | 3,631,580 | 4,074,540  | 3,752,090  | 3,171,040 | 2,556,480 | 2,083,580 | 2,188,690 | 2,141,530 | 2,656,280 | 2,619,040 | 3,213,600 | 3,021,750 | 35,110,200 |
| Total                                   | 9,763,599 | 11,682,293 | 10,723,020 | 7,596,580 | 5,229,493 | 3,454,919 | 3,001,052 | 2,892,917 | 3,396,732 | 3,663,913 | 5,662,056 | 6,497,532 | 73,564,106 |
| <b>Use per customer</b>                 |           |            |            |           |           |           |           |           |           |           |           |           |            |
| RS                                      | 100       | 123        | 111        | 71        | 44        | 21        | 9         | 9         | 9         | 10        | 37        | 56        | 600        |
| SCFS                                    | 223       | 283        | 256        | 147       | 76        | 37        | 22        | 19        | 21        | 45        | 77        | 110       | 1,319      |
| SCFM                                    | 1,216     | 1,417      | 1,333      | 828       | 475       | 277       | 208       | 205       | 213       | 300       | 531       | 682       | 7,670      |
| SCFL                                    | 3,252     | 3,610      | 3,267      | 2,199     | 1,322     | 792       | 1,554     | 945       | 677       | 3,805     | 2,454     | 1,873     | 25,648     |
| LV                                      | 7,451     | 11,154     | 11,812     | 9,494     | 6,443     | 5,469     | 5,840     | 6,601     | 5,769     | 4,921     | 8,156     | 7,603     | 90,725     |
| SVFTS                                   | 346       | 431        | 393        | 267       | 143       | 73        | 47        | 43        | 49        | 59        | 132       | 212       | 2,202      |
| SVFTM                                   | 1,855     | 1,642      | 1,503      | 999       | 516       | 294       | 190       | 184       | 201       | 220       | 511       | 803       | 8,452      |
| SVFTL                                   | 3,064     | 3,871      | 3,547      | 2,425     | 1,798     | 814       | 574       | 396       | 505       | 689       | 1,434     | 1,840     | 21,388     |
| LVFT                                    | 56,743    | 64,675     | 57,724     | 49,548    | 39,945    | 33,073    | 33,672    | 32,447    | 40,866    | 40,293    | 49,440    | 47,215    | 545,048    |
| <b>Monthly Use Compared to Peak Use</b> |           |            |            |           |           |           |           |           |           |           |           |           |            |
| RS                                      | 81%       | 100%       | 91%        | 58%       | 36%       | 17%       | 8%        | 7%        | 7%        | 8%        | 30%       | 46%       |            |
| SCFS                                    | 78%       | 100%       | 91%        | 52%       | 27%       | 13%       | 8%        | 7%        | 7%        | 16%       | 27%       | 39%       |            |
| SCFM                                    | 86%       | 100%       | 95%        | 59%       | 34%       | 20%       | 15%       | 15%       | 15%       | 21%       | 38%       | 50%       |            |
| SCFL                                    | 80%       | 92%        | 83%        | 56%       | 34%       | 20%       | 41%       | 26%       | 18%       | 100%      | 72%       | 52%       |            |
| LV                                      | 66%       | 94%        | 100%       | 80%       | 55%       | 46%       | 51%       | 54%       | 47%       | 42%       | 66%       | 59%       |            |
| SVFTS                                   | 80%       | 100%       | 91%        | 61%       | 33%       | 17%       | 11%       | 10%       | 11%       | 14%       | 30%       | 49%       |            |
| SVFTM                                   | 83%       | 100%       | 92%        | 61%       | 31%       | 18%       | 12%       | 11%       | 12%       | 13%       | 31%       | 48%       |            |
| SVFTL                                   | 74%       | 100%       | 83%        | 57%       | 42%       | 19%       | 14%       | 10%       | 12%       | 16%       | 32%       | 42%       |            |
| LVFT                                    | 89%       | 100%       | 92%        | 78%       | 63%       | 51%       | 54%       | 53%       | 65%       | 64%       | 79%       | 74%       |            |
| <b>Base Use per customer</b>            |           |            |            |           |           |           |           |           |           |           |           |           |            |
| RS                                      | 9         |            |            |           |           |           |           |           |           |           |           |           |            |
| SCFS                                    | 20        |            |            |           |           |           |           |           |           |           |           |           |            |
| SCFM                                    | 207       |            |            |           |           |           |           |           |           |           |           |           |            |
| SCFL                                    | 811       |            |            |           |           |           |           |           |           |           |           |           |            |
| LV                                      | 6,185     |            |            |           |           |           |           |           |           |           |           |           |            |
| SVFTS                                   | 45        |            |            |           |           |           |           |           |           |           |           |           |            |
| SVFTM                                   | 187       |            |            |           |           |           |           |           |           |           |           |           |            |
| SVFTL                                   | 450       |            |            |           |           |           |           |           |           |           |           |           |            |
| LVFT                                    | 33,060    |            |            |           |           |           |           |           |           |           |           |           |            |
| <b>Heat Use per customer</b>            |           |            |            |           |           |           |           |           |           |           |           |           |            |
| RS                                      | 91        | 114        | 103        | 62        | 36        | 13        | 1         | 0         | 0         | 1         | 28        | 47        | 496        |
| SCFS                                    | 209       | 269        | 236        | 127       | 56        | 17        | 2         | 0         | 1         | 25        | 57        | 90        | 1,078      |
| SCFM                                    | 1,009     | 1,211      | 1,126      | 622       | 268       | 70        | 2         | 0         | 6         | 93        | 324       | 476       | 5,206      |
| SCFL                                    | 2,441     | 2,799      | 2,457      | 1,388     | 511       | 0         | 748       | 134       | 0         | 2,994     | 1,643     | 1,062     | 16,172     |
| LV                                      | 1,266     | 4,968      | 5,627      | 3,309     | 258       | 0         | 0         | 416       | 0         | 0         | 1,971     | 1,418     | 19,233     |
| SVFTS                                   | 301       | 386        | 348        | 222       | 98        | 28        | 2         | 0         | 4         | 14        | 87        | 167       | 1,655      |
| SVFTM                                   | 1,168     | 1,455      | 1,316      | 812       | 329       | 108       | 3         | 0         | 15        | 33        | 324       | 616       | 6,180      |
| SVFTL                                   | 2,613     | 3,421      | 3,097      | 1,975     | 1,347     | 864       | 124       | 0         | 55        | 239       | 984       | 1,389     | 15,607     |
| LVFT                                    | 23,684    | 31,615     | 24,665     | 16,488    | 6,885     | 13        | 612       | 0         | 7,806     | 7,233     | 16,380    | 14,155    | 149,536    |
| Actual Billing Degree Days              | 1,033     | 1,089      | 901        | 513       | 202       | 70        | -         | -         | -         | 218       | 578       | 775       | 5,377      |