|                |                                       |         | Current        |         |   |           | 1 Yr Ago       |            |   | 2 Yr Ago |                |            | 3 Yr Ago (pre-Dood-Frank) |         |                |            |
|----------------|---------------------------------------|---------|----------------|---------|---|-----------|----------------|------------|---|----------|----------------|------------|---------------------------|---------|----------------|------------|
|                |                                       | Two-way | Two-way        | Two-way |   | Two-way   | Two-way        | Two-way    |   | Two-way  | Two-way        | Two-way    |                           | Two-way | Two-way        | Two-way    |
|                |                                       | Prompt  | <u>х-н</u>     | J-V     |   | Prompt    | <u>X-H</u>     | <u>J-V</u> |   | Prompt   | <u>X-H</u>     | <u>J-V</u> |                           | Prompt  | <u>X-H</u>     | <u>J-V</u> |
| Tier 1         |                                       |         |                |         | - |           |                |            | _ |          |                |            |                           |         |                |            |
| EAST           | Chicago                               | 0.005   | 0.01           | 0.015   | - | 0.005     | 0.005          | 0.01       | _ | 0.005    | 0.01           | 0.01       |                           | 0.005   | 0.005          | 0.005      |
| EAST           | Panhandle                             | 0.005   | 0.02           | 0.01    |   | 0.005     | 0.01           | 0.01       |   | 0.005    | 0.01           | 0.01       |                           | 0.005   | 0.005          | 0.005      |
| EAST           | Dominion                              | 0.025   | 0.04           | 0.03    |   | 0.01      | 0.02           | 0.015      |   | 0.01     | 0.015          | 0.01       |                           | 0.005   | 0.005          | 0.01       |
| GULF           | Houston Ship                          | 0.005   | 0.005          | 0.005   |   | 0.005     | 0.005          | 0.005      |   | 0.005    | 0.005          | 0.005      |                           | 0.005   | 0.005          | 0.005      |
| GULF           | TexOk                                 | 0.005   | 0.005          | 0.01    |   | 0.005     | 0.005          | 0.01       |   | 0.005    | 0.005          | 0.01       |                           | 0.005   | 0.005          | 0.005      |
| GULF           | Sonat                                 | 0.01    | 0.01           | 0.015   |   | 0.01      | 0.005          | 0.015      |   | 0.005    | 0.005          | 0.015      |                           | 0.005   | 0.005          | 0.01       |
| GULF           | Col Mainline                          | 0.005   | 0.005          | 0.01    |   | 0.005     | 0.01           | 0.005      |   | 0.005    | 0.005          | 0.005      |                           | 0.005   | 0.005          | 0.005      |
| WEST           | SoCal                                 | 0.005   | 0.01           | 0.015   |   | 0.005     | 0.0075         | 0.01       |   | 0.005    | 0.0075         | 0.0075     |                           | 0.005   | 0.005          | 0.005      |
| WEST           | PGE Citygate                          | 0.005   | 0.01           | 0.015   |   | 0.005     | 0.0075         | 0.01       |   | 0.005    | 0.0075         | 0.0075     |                           | 0.005   | 0.005          | 0.005      |
| WEST           | Rockies                               | 0.005   | 0.01           | 0.015   |   | 0.005     | 0.0075         | 0.01       |   | 0.005    | 0.0075         | 0.0075     |                           | 0.005   | 0.005          | 0.005      |
| CANADA         | Aeco/NIT                              | 0.005   | 0.01           | 0.01    |   | 0.005     | 0.01           | 0.01       |   | 0.005    | 0.01           | 0.01       |                           | 0.005   | 0.01           | 0.01       |
| CANADA         | DAWN                                  | 0.01    | 0.02           | 0.03    |   | 0.005     | 0.01           | 0.02       |   | 0.005    | 0.01           | 0.01       |                           | 0.005   | 0.0075         | 0.0075     |
| Tier 2         |                                       |         |                |         |   |           |                |            |   |          |                |            |                           |         |                |            |
| EAST           | Mich                                  | 0.005   | 0.01           | 0.02    |   | 0.005     | 0.01           | 0.015      |   | 0.005    | 0.01           | 0.01       |                           | 0.005   | 0.01           | 0.01       |
| EAST           | Tetco M3                              | 0.01    | 0.1            | 0.015   |   | 0.01      | 0.05           | 0.01       |   | 0.005    | 0.03           | 0.01       |                           | 0.005   | 0.02           | 0.01       |
| EAST           | NNG Vent                              | 0.01    | 0.02           | 0.02    |   | 0.01      | 0.015          | 0.01       |   | 0.005    | 0.01           | 0.01       |                           | 0.005   | 0.01           | 0.01       |
| GULF           | Waha                                  | 0.01    | 0.01           | 0.015   |   | 0.01      | 0.005          | 0.015      |   | 0.005    | 0.005          | 0.015      |                           | 0.005   | 0.005          | 0.01       |
| GULF           | Transco Z4                            | 0.01    | 0.01           | 0.015   |   | 0.005     | 0.005          | 0.01       |   | 0.005    | 0.005          | 0.01       |                           | 0.005   | 0.005          | 0.005      |
| GULF           | Tenn 500                              | 0.01    | 0.01           | 0.015   |   | 0.01      | 0.01           | 0.015      |   | 0.005    | 0.01           | 0.01       |                           | 0.005   | 0.01           | 0.01       |
| GULF           | FGT Z3                                | 0.01    | 0.01           | 0.015   |   | 0.01      | 0.01           | 0.015      |   | 0.01     | 0.005          | 0.01       |                           | 0.01    | 0.005          | 0.01       |
| WEST           | Waha                                  | 0.005   | 0.01           | 0.015   |   | 0.005     | 0.0075         | 0.01       |   | 0.005    | 0.0075         | 0.0075     |                           | 0.005   | 0.005          | 0.005      |
| WEST           | San Juan                              | 0.0075  | 0.015          | 0.02    |   | 0.005     | 0.015          | 0.0175     |   | 0.005    | 0.0125         | 0.015      |                           | 0.005   | 0.01           | 0.0125     |
| WEST           | Permian                               | 0.005   | 0.01           | 0.015   |   | 0.005     | 0.01           | 0.0125     |   | 0.005    | 0.01           | 0.01       |                           | 0.005   | 0.0075         | 0.0075     |
| WEST           | Malin                                 | 0.0075  | 0.015          | 0.02    |   | 0.005     | 0.015          | 0.015      |   | 0.005    | 0.0125         | 0.0125     |                           | 0.005   | 0.01           | 0.01       |
| WEST           | CIG                                   | 0.0075  | 0.015          | 0.02    |   | 0.005     | 0.015          | 0.0175     |   | 0.005    | 0.0125         | 0.015      |                           | 0.005   | 0.01           | 0.0125     |
| CANADA         | Emerson                               | 0.05    | 0.05           | 0.05    |   | 0.025     | 0.025          | 0.025      |   | 0.025    | 0.025          | 0.025      |                           | 0.02    | 0.02           | 0.02       |
| CANADA         | Waddington                            | 0.1     | 0.1            | 0.1     |   | 0.05      | 0.05           | 0.05       |   | 0.05     | 0.05           | 0.05       |                           | 0.02    | 0.02           | 0.02       |
| Tion 2         |                                       |         |                |         |   |           |                |            |   |          |                |            |                           |         |                |            |
| Tier 3<br>EAST | Transes -C                            | 0.07    | 0.2            | 0.1     |   | 0.05      | 0.15           | 0.05       |   | 0.03     | 0.05           | 0.01       |                           | 0.02    | 0.05           | 0.01       |
|                | Transco z6<br>NNG Demarc              | 0.07    |                | 0.1     |   |           | 0.15           | 0.05       |   |          | 0.05           |            |                           | 0.02    |                | 0.01       |
| EAST           |                                       | 0.015   | 0.04           |         |   | 0.01 0.03 |                | 0.02       |   | 0.01     | 0.01           | 0.01       |                           | 0.005   | 0.005          | 0.01       |
| GULF<br>GULF   | Tetco ELA<br>Tenn Z0                  | 0.02    | 0.2            | 0.02    |   | 0.03      | 0.03           | 0.05       |   | 0.03     | 0.05           | 0.05       |                           | 0.05    | 0.05           | 0.05       |
| GULF           |                                       | 0.015   | 0.03           | 0.03    |   | 0.015     | 0.03           | 0.03       |   | 0.015    | 0.02           | 0.02       |                           | 0.015   | 0.02           | 0.02       |
|                | Tetco STX                             | 0.015   | 0.03           | 0.03    |   | 0.015     | 0.03           | 0.03       |   | 0.015    | 0.02           | 0.02       |                           | 0.015   | 0.02           | 0.02       |
| WEST           | Cheyenne Hub(trade as index diffs.)   |         |                |         |   |           |                |            |   |          |                |            |                           |         |                |            |
| WEST           | PGE Topock(trade as index diffs.)     | 0.0125  | 0.015          | 0.0175  |   | 0.01      | 0.0125         | 0.015      |   | 0.0075   | 0.01           | 0.0125     |                           | 0.005   | 0.0075         | 0.01       |
| WEST           | SoCal CityGate(trade as index diffs.) | 0.0125  | 0.015          | 0.0175  |   | 0.01      | 0.0125         | 0.015      |   | 0.0075   | 0.01           | 0.0125     |                           | 0.005   | 0.0075         | 0.01       |
| CANADA         | St. 2                                 | 0.1     | 0.1            | 0.1     |   | 0.1       | 0.05           | 0.05       |   | 0.05     | 0.05           | 0.05       |                           | 0.05    | 0.05           | 0.05       |
| CANADA         | Niagara                               | 1       | No longer trad |         |   | 1         | No longer trad |            |   |          |                | er trades  |                           | -       | 0.2            | 0.2        |
| CANADA         | Chipewa                               |         | No longer trad | es      |   |           | No longer trad | es         |   |          | No longer trad | es         |                           | I       | No longer trad | es         |

- EAST "I would say the major difference is in how much volume it takes for the market to move or how quick the two way gets wide when it does trade."
- EASTOn the Tier 1 locations a 1 day trade will usually move the market .01 to .02, and 1/2 day in the xh or JV does the same. Where as a year ago it would take 2 day, 2 years ago 3 day and 3 years ago 5 dayEASTOn the Tier 2 locations a 1/2 a day trade will move the market .01 to .02, and a quarter a day will do the same xh and jv. Whereas it would have taken 1 day a year ago, 2 day 2 years ago and 4 or 5 day 3 years ago.EASTOn the Tier 3 locations a 1/4 day will move the market .02 to .04 and .04 to .05 in the xh and jv. Where as a year ago would have been half a day, 2 years ago 1 day and 3 years ago 2 or 3 a day
- GULF"It's been interesting to see that some markets have actually gained some liquidity due to the fundamental changes in the market such as back-hauls, LNG projects and Mexico exports."GULFOn the Tier 1 locations a 5/day trade will usually move the market .01 to .02, and 3 day in the xh or JV does the same. Where as a year ago it would take 7/day, 2 years ago 7/day and 3 years ago 10/dayGULFOn the Tier 2 locations a 2/day trade will move the market .01 to .02, and a 1/day will do the same xh and jv. Whereas it would have taken 3/day a year ago, 4/ day 2 years ago and 5/day 3 years ago.
- GULF On the Tier 3 locations a 1/day will move the market .015 to .02 and .02 to .03 in the xh and jv. Some of the Tier 3 markets were barely quoted 2 to 3 years ago. (more active with Back-haul and Mexico exports)
- WEST"Market depth has significantly dropped beyond prompt month and balance of season. In addition, beyond 12 to 18 months out there is virtually no market makers to quote even light volume at any price."WESTOn the Tier 1 locations a 1/day to 5/day trade can move the market .01 to .03 and 1/4 day to 1/day in XH and JV can move it .01 to .03 with no follow. 3 years ago 2/day to 4/day could trade moving market .02.WESTOn the Tier 2 locations a 1/day to 2/day trade can move the market .01 to .03 and 1/4 day to 1/2/day in XH and JV can move it .01 to .03 with no follow. 3 years ago 1/day to 2/day could trade moving market .02.WESTOn the Tier 2 locations a 1/day to 2/day trade can move the market .01 to .03 and 1/4 day to 1/2/day in XH and JV can move it .01 to .03 with no follow. 3 years ago 1/day to 2/day could trade moving market .02.WESTOn the Tier 3 locations a 1/day to 3/day trade can move the market .01 to .02 and 1/2 day in XH and JV can move it .02 to .03 with no follow. 3 years ago 3/day to 5/day could trade moving market .01 to .02.
- CANADA "On the whole our basis at AECO has held in there liquidity wise even with participants exiting the market. Physical production flows out East have changed those basis markets the most with traditional flow being reversed" CANADA On the Tier 1 locations a 1 day trade may not move the market . and 1/day in the xh or JV may move the market .005 to .01
- CANADA On the Tier 2 locations a 1/2 a day trade will move the market .01 to .02, and a 1/2 day will do the same xh and jv. Whereas it would have taken 1 day a year ago, 2 day 2 years ago and 4 or 5 day 3 years ago. CANADA On the Tier 3 locations a 1/2 day will move the market .02 to .04 and .04 to .05 in the xh and jv. Where as a year ago would have been 1/day, 2 years ago 2/day and 3 years ago 2 or 3/day

| contracts/day | Current | 1 year ago | 2 years ago | 3 years ago |
|---------------|---------|------------|-------------|-------------|
| East tier 1   | 1       | 2          | 3           | 5           |
| East tier 2   | 0.5     | 1          | 2           | 4.5         |
| East tier 3   | 0.25    | 0.5        | 1           | 2.5         |
|               |         |            |             |             |
| Gulf tier 1   | 5       | 7          | 7           | 10          |
| Gulf tier 2   | 2       | 3          | 4           | 5           |
| Gulf tier 3   | 1       | NA         | NA          | NA          |
|               |         |            |             |             |
| West tier 1   | 3       | 3          | 3           | 3           |
| West tier 2   | 1.5     | 1.5        | 1.5         | 1.5         |
| West tier 3   | 2       | 2          | 2           | 4           |
|               |         |            |             |             |
| Canada tier 1 | 2       | 2          | 2           | 2           |
| Canada tier 2 | 0.5     | 1          | 2           | 4.5         |
| Canada tier 3 | 0.5     | 1          | 2           | 2.5         |
|               |         |            |             |             |