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**Addendum 1  
19-21AA  
HOT WATER PACKAGED ENERGY TRANSFER STATIONS  
PHASE 3**

Addendum 1, including an updated Attachment B - ETS Schedule, has been uploaded to the Bid Express solicitation. Please visit [www.bidexpress.com](http://www.bidexpress.com) for details or to view and/or download the information.

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Posted: October 15, 2019

**HOT WATER PACKAGED ENERGY TRANSFER STATIONS**  
**PHASE 3**  
**BID NUMBER 19-21AA**

**ADDENDUM #1**

**ETS SCHEDULE**

The ETS Schedule has been updated; cells that have been highlighted have corrected or added values.

**DOMESTIC HOT WATER**

Domestic hot water shall be instantaneous; no circulation pumps are required on the skids. The DHW loop supply temperature shall be 130°F. The building DHW return shall mix with city water before entering the HX. Primary temperature from DES shall be the summertime loop temperature of 160°.

**HOLIDAY INN ENERGY TRANSFER STATION**

There will be a primary ETS at Holiday INN with tertiary loops on the secondary side of this primary ETS. The reason for this is to keep primary side (DES piping) through the building to a minimum. The ETSs at Holiday Inn shall be as follows:

- 27 is the main ETS for the building. It will have the entire heating load and the DHW load on it. There is also a heat exchanger for the radiation loop along the 1<sup>st</sup> floor front windows. This should have the main meter on it.
- 27.1 This is a secondary side ETS for a heat pump loop. No meter.
- 27.2 This is a secondary side ETS for a Skywalk ETS loop. Include a meter here.
- 27.3 This is a secondary side ETS for a spa. No meter.
- 27.4 This is a secondary side ETS with a HX for AHUs, radiation loop, and a pool. No meter.
- 27.5 This is a secondary side ETS for a makeup air unit in the penthouse (16th floor). No meter.

The Holiday Inn pool and spa temperature secondary temperatures have been adjusted in the ETS Schedule.

- The spa shall have a EWT of 90°F and a LWT of 100°F.
- The pool shall have a EWT of 75°F and a LWT of 95°F.

| ETS # | Model Type | Phase | Bldg #    | Building Name                 | HX Capacity [MBH] | Service Type | District-Side Flow [gpm] | Bldg-Side Flow [gpm] | District-Side EWT [°F] | District-Side LWT [°F] | Bldg-Side EWT [°F] | Bldg-Side LWT [°F] | District-Side Max HX DP [psid] | Bldg-Side Max HX DP [psid] | Glycol? | New Pump Req'd? | Preliminary Pump Flow [gpm] | Preliminary Pump Head [ft] | Campus-Side Range of Potential DP at Peak [psid] | Voltage available in Mech room |
|-------|------------|-------|-----------|-------------------------------|-------------------|--------------|--------------------------|----------------------|------------------------|------------------------|--------------------|--------------------|--------------------------------|----------------------------|---------|-----------------|-----------------------------|----------------------------|--------------------------------------------------|--------------------------------|
| 25    |            | 3     |           | Zeitgeist                     | 731               | HHW          | 15                       | 22                   | 215                    | 120                    | 110                | 175                | 5                              | 5                          | Y       | Y               | 22                          | 20                         |                                                  |                                |
| 25    |            | 3     |           | Zeitgeist                     | 366               | HHW          | 12                       | 24                   | 215                    | 155                    | 150                | 180                | 5                              | 5                          |         | Y               | 24                          | 30                         |                                                  |                                |
| 25    |            | 3     |           | Zeitgeist                     | 100               | DHW          | 5                        | 7                    | 160                    | 120                    | 100                | 130                | 5                              | 5                          |         |                 | 0                           |                            |                                                  |                                |
| 27    |            | 3     | 2290      | Holiday Inn                   | 9434              | HHW          | 314                      | 629                  | 215                    | 155                    | 150                | 180                | 5                              | 5                          |         | Y               | 629                         | 100                        |                                                  | 240                            |
| 27.1  |            | 3     | 2290      | Holiday Inn                   | 3774              | HHW          | 116                      | 116                  | 180                    | 115                    | 110                | 175                | 5                              | 5                          |         | Y               | 116                         | 50                         |                                                  |                                |
| 27    |            | 3     | 2290      | Holiday Inn                   | 5981              | DHW          | 299                      | 399                  | 160                    | 120                    | 100                | 130                | 5                              | 5                          |         |                 | 0                           |                            |                                                  |                                |
| 27    |            | 3     | 2290      | Holiday Inn                   | 472               | HHW          | 38                       | 31                   | 175                    | 150                    | 145                | 175                | 5                              | 5                          |         | Y               | 31                          | 30                         |                                                  |                                |
| 27.2  |            | 3     | 2290      | Holiday Inn                   | 943               | HHW          | 75                       | 63                   | 175                    | 150                    | 145                | 175                | 5                              | 5                          |         |                 | 0                           |                            |                                                  |                                |
| 27.3  |            | 3     | 2290      | Holiday Inn - Pool            | 472               | HHW          | 189                      | 94                   | 155                    | 150                    | 90                 | 100                | 5                              | 5                          |         |                 | 0                           |                            |                                                  |                                |
| 27.4  |            | 3     | 2290      | Holiday Inn - Spa             | 472               | HHW          | 189                      | 94                   | 155                    | 150                    | 75                 | 85                 | 5                              | 5                          |         |                 | 0                           |                            |                                                  |                                |
| 27.4  |            | 3     | 2290      | Holiday Inn                   | 472               | HHW          | 38                       | 31                   | 175                    | 150                    | 145                | 175                | 5                              | 5                          |         |                 | 0                           |                            |                                                  |                                |
| 27.4  |            | 3     | 2290      | Holiday Inn                   | 4717              | HHW          | 377                      | 314                  | 175                    | 150                    | 145                | 175                | 5                              | 5                          | Y       | Y               | 314                         | 40                         |                                                  |                                |
| 27.5  |            | 3     | 2290      | Holiday Inn                   | 3774              | HHW          | 302                      | 252                  | 175                    | 150                    | 145                | 175                | 5                              | 5                          | Y       | Y               | 252                         | 40                         |                                                  |                                |
| 28    |            | 3     | 4310      | Wellsfargo                    | 2673              | HHW          | 89                       | 178                  | 215                    | 155                    | 150                | 180                | 5                              | 5                          | Y       | Y               | 178                         | 100                        |                                                  | 240                            |
| 28    |            | 3     | 4310      | Wellsfargo                    | 535               | HHW          | 18                       | 36                   | 215                    | 155                    | 150                | 180                | 5                              | 5                          |         | Y               | 36                          | 80                         |                                                  |                                |
| 28    |            | 3     | 4310      | Wellsfargo                    | 108               | DHW          | 5                        | 7                    | 160                    | 120                    | 100                | 130                | 5                              | 5                          |         |                 | 0                           |                            |                                                  |                                |
| 29    |            | 3     | 1270      | MN Natl Bank                  | 60                | HHW          | 2                        | 4                    | 215                    | 155                    | 150                | 180                | 5                              | 5                          |         |                 | 0                           |                            |                                                  |                                |
| 30    |            | 3     | 1260      | MN Surplus                    | 76                | HHW          | 3                        | 5                    | 215                    | 155                    | 150                | 180                | 5                              | 5                          |         | Y               | 5                           | 40                         |                                                  |                                |
| 31    |            | 3     | 1241      | DTA Center                    | 108               | HHW          | 4                        | 7                    | 215                    | 155                    | 150                | 180                | 5                              | 5                          | Y       | Y               | 7                           | 30                         |                                                  |                                |
| 31    |            | 3     | 1241      | DTA Center                    | 79                | HHW          | 3                        | 5                    | 215                    | 155                    | 150                | 180                | 5                              | 5                          |         | Y               | 5                           | 40                         |                                                  |                                |
| 36    |            | 3     | 2400/2490 | Northshore Bank - 125W & 130W | 1230              | HHW          | 41                       | 82                   | 215                    | 155                    | 150                | 180                | 5                              | 5                          |         | Y               | 82                          | 60                         |                                                  |                                |
| 36    |            | 3     | 2400/2490 | Northshore Bank - 125W & 130W | 246               | HHW          | 8                        | 16                   | 215                    | 155                    | 150                | 180                | 5                              | 5                          |         | Y               | 16                          | 30                         |                                                  |                                |
| 36    |            | 3     | 2400/2490 | Northshore Bank - 125W & 130W | 655               | DHW          | 33                       | 44                   | 160                    | 120                    | 100                | 130                | 5                              | 5                          |         |                 | 0                           |                            |                                                  |                                |
| 38    |            | 3     | 2460      | Cosmetology                   | 35                | HHW          | 1                        | 2                    | 215                    | 155                    | 150                | 180                | 5                              | 5                          |         | Y               | 2                           | 35                         |                                                  |                                |
| 38    |            | 3     | 2460      | Cosmetology                   | 132               | HHW          | 4                        | 9                    | 215                    | 155                    | 150                | 180                | 5                              | 5                          | Y       | Y               | 9                           | 35                         |                                                  |                                |
| 39    |            | 3     | 2380      | Maurices 105 W sup            | 680               | HHW          | 23                       | 45                   | 215                    | 155                    | 150                | 180                | 5                              | 5                          | Y       | Y               | 45                          | 60                         |                                                  |                                |
| 39    |            | 3     | 2380      | Maurices 105 W sup            | 280               | HHW          | 9                        | 19                   | 215                    | 155                    | 150                | 180                | 5                              | 5                          |         | Y               | 19                          | 40                         |                                                  |                                |
| 40    |            | 3     | 2390      | Dubh-Linn                     | 45                | DHW          | 2                        | 3                    | 160                    | 120                    | 100                | 130                | 5                              | 5                          |         |                 | 0                           |                            |                                                  | 120                            |
| 40    |            | 3     | 2390      | Dubh-Linn                     | 121               | HHW          | 4                        | 8                    | 215                    | 155                    | 150                | 180                | 5                              | 5                          | Y       | Y               | 8                           | 30                         |                                                  |                                |
| 41    |            | 3     | 2150      | Maurices 106 W. Sup           | 746               | HHW          | 25                       | 50                   | 215                    | 155                    | 150                | 180                | 5                              | 5                          | Y       | Y               | 50                          | 50                         |                                                  |                                |
| 41    |            | 3     | 2150      | Maurices 106 W. Sup           | 149               | HHW          | 5                        | 10                   | 215                    | 155                    | 150                | 180                | 5                              | 5                          |         | Y               | 10                          | 30                         |                                                  |                                |
| 42    |            | 3     | 2350      | US Bank                       | 738               | HHW          | 15                       | 21                   | 215                    | 115                    | 110                | 180                | 5                              | 5                          |         |                 | 0                           |                            |                                                  | 240                            |
| 42    |            | 3     | 2350      | US Bank                       | 185               | HHW          | 6                        | 12                   | 215                    | 155                    | 150                | 180                | 5                              | 5                          |         |                 | 0                           |                            |                                                  |                                |
| 42    |            | 3     | 2350      | US Bank                       | 738               | HHW          | 25                       | 49                   | 215                    | 155                    | 150                | 180                | 5                              | 5                          | Y       |                 | 0                           |                            |                                                  |                                |
| 42    |            | 3     | 2350      | US Bank                       | 84                | DHW          | 4                        | 6                    | 160                    | 120                    | 100                | 130                | 5                              | 5                          |         |                 | 0                           |                            |                                                  | 240                            |
| 43    |            | 3     | 2950      | Sawmill Furniture             | 43                | HHW          | 1                        | 3                    | 215                    | 155                    | 150                | 180                | 5                              | 5                          |         | Y               | 3                           | 50                         |                                                  | 120                            |
| 43    |            | 3     | 2950      | Sawmill Furniture             | 60                | HHW          | 2                        | 4                    | 215                    | 155                    | 150                | 180                | 5                              | 5                          | Y       | Y               | 4                           | 40                         |                                                  |                                |
| 44    |            | 3     | 2370      | Maurices 3 (117W)             | 567               | HHW          | 19                       | 38                   | 215                    | 155                    | 150                | 180                | 5                              | 5                          |         | Y               | 38                          | 40                         |                                                  |                                |
| 45    |            | 3     | 860       | Hunter Building               | 163               | HHW          | 5                        | 11                   | 215                    | 155                    | 150                | 180                | 5                              | 5                          | Y       | Y               | 11                          | 35                         |                                                  | 240                            |
| 45    |            | 3     | 860       | Hunter Building               | 196               | HHW          | 4                        | 6                    | 215                    | 115                    | 110                | 180                | 5                              | 5                          |         |                 | 0                           |                            |                                                  |                                |
| 45    |            | 3     | 860       | Hunter Building               | 33                | HHW          | 1                        | 2                    | 215                    | 155                    | 150                | 180                | 5                              | 5                          |         | Y               | 2                           | 30                         |                                                  |                                |
| 46    |            | 3     | 810       | Foxx Furs                     | 85                | HHW          | 3                        | 6                    | 215                    | 155                    | 150                | 180                | 5                              | 5                          |         | Y               | 6                           | 40                         |                                                  | 120                            |
| 47    |            | 3     | 850       | Global Village                | 136               | HHW          | 5                        | 9                    | 215                    | 155                    | 150                | 180                | 5                              | 5                          |         | Y               | 9                           | 50                         |                                                  | 120                            |
| 48    |            | 3     | 1250      | Harbor Center Upper           | 830               | HHW          | 17                       | 24                   | 215                    | 115                    | 110                | 180                | 5                              | 5                          |         |                 | 0                           |                            |                                                  |                                |
| 48    |            | 3     | 1251      | Harbor Center Lower           | 430               | HHW          | 9                        | 12                   | 215                    | 115                    | 110                | 180                | 5                              | 5                          |         |                 | 0                           |                            |                                                  |                                |
| 48    |            | 3     | 1250/1251 | Harbor Center Lower           | 86                | HHW          | 3                        | 6                    | 215                    | 155                    | 150                | 180                | 5                              | 5                          |         | Y               |                             | 50                         |                                                  |                                |
| 48    |            | 3     | 1250/1251 | Harbor Center                 | 415               | DHW          | 21                       | 28                   | 160                    | 120                    | 100                | 130                | 5                              | 5                          |         |                 | 0                           |                            |                                                  |                                |
| 49    |            | 3     | 1280      | Duluth Plumbing Supply        | 410               | HHW          | 14                       | 27                   | 215                    | 155                    | 150                | 180                | 5                              | 5                          |         | Y               | 27                          | 60                         |                                                  |                                |