

***Appendix D-Attachment C-2***

***Wind MFS Bidder Questions***

***for***

***2021 Request for Proposals***

***for***

***Renewable Resources***

***For Entergy Arkansas, LLC***

 Entergy Arkansas, LLC

August 3, 2021

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| **Appendix C-2: Proposed Project Information** |
| Bidder must fill out this table for the proposed wind project and attach equipment datasheets. |  |
| **Item** | **Site Information /Design Conditions** | **Responses** | **Units** |
| 1 | Design Lifetime of the plant |   | Yr |
| 2 | Site coordinates |   |   |
| 3 | Project Size |   | Mwac |
| 4 | Project Land Area |   | ac |
| 5 | Site Description |   |   |
| 6 | Distance to POI |   | miles |
| 7 | Annual Yield |   | GWh/yr |
| 8 | Seasonal Yield |   | GWh/yr |
| 9 | Project Availability |   | % |
| 10 | Average Elevation |   | FT a.s.l |
| 11 | Ambient Temperature Recorded (Minimum/Average/Maximum) |   | °F |
| 12 | Design Temperature for Operation (Minimum/Maximum) |   | °F |
| 13 | Design Relative Humidity |   | % |
| 14 | Design wind speed  |   | mph |
| 15 | Rainfall (Annual Avg/Annual Max/1-day Max) |   | in. |
| 16 | Seismic Zone (Zone and ground acceleration values shall be confirmed by the geotechnical study). |   |   |
|  |  |  |  |
| **Item** | **Wind Turbine Generators (WTG)** | **Responses** | **Units** |
| 1 | *Attach datasheets* |   |   |
| 2 | Manufacturer |   |   |
| 3 | Model Number |   |   |
| 4 | Wind Turbine Classification |   |   |
| 5 | Turbine Nameplate for MW |   |   |
| 6 | Turbine Nameplate for Power Factor |   |   |
| 7 | Turbine Nameplate for MVA |   |   |
| 8 | Cut-in Wind Speed |   | mph |
| 9 | Rated Wind Speed |   | mph |
| 10 | Cut-Out Wind Speed |   | mph |
| 11 | Survival Wind Speed |   | mph |
| 12 | Standard Operating Temperature Range |   |   |
| 13 | Cold Weather Package Temperature Range |   |   |
| 14 | Hot Weather Package Temperature Range |   |   |
| 15 | Hub Height |   | m |
| 16 | Rotor Diameter |   | m |
| 17 | Rotor Swept Area |   | m² |
| 18 | Gearbox or Direct Drive |   |   |
| 19 | Gearbox Manufacturer  |   |   |
| 20 | Gearbox Model |   |   |
| 21 | Generator Manufacturer |   |   |
| 22 | Generator Model |   |   |
| 23 | Blade Manufacturer |   |   |
| 24 | Blade Model |   |   |
| 25 | Plant Control Platform / System |   |   |
| 26 | SCADA for Turbine or complete Wind Farm including MET tower |   |   |
| 27 | WTG transformer location (up tower, down tower, pad mount) |   |   |
| 28 | Can the Gearbox be replaced without removing the blades?  |   | Y/N |
| 29 | Can the Generator be replaced without removing the blades? |   | Y/N |
| 30 | How often does the WTG require regular maintenance? |   |   |
| 31 | Warranty for WTG Performance |   |   |
| 32 | Warranty for Gearbox (years) |   | YRS |
| 33 | Warranty for Generator (years) |   | YRS |
| 34 | Warranty for Blades (years) |   | YRS |
| 35 | Warranty for Tower (years) |   | YRS |
| 36 | Warranty for Other Parts |   | YRS |
| 37 | How many of these WTG Models are operational in the USA? |   |   |
| 38 | How many years has this WTG model been operational in the USA? |   |   |
| 39 | Please confirm the WTGs meet each of the following conditions: |   |   |
| 40 | Curtailment Control |   | Y/N |
| 41 | Voltage Control |   | Y/N |
| 42 | Voltage Droop Control |   | Y/N |
| 43 | Power Factor Controls |   | Y/N |
| 44 | Frequency Controls |   | Y/N |
| 45 | Integrated Control of Capacitor and Inductor Banks |   | Y/N |
| 46 | Reactive Power Production During Zero Real Power Production |   | Y/N |
| 47 | Mechanical Loads Analysis included in SCADA? |   | Y/N |
| 48 | Low/High/Zero Voltage Ride-Through |   | Y/N |
| 49 | Special Installation Tools Included |   | Y/N |
| 50 | Wind Farm Control Management System included in SCADA? |   | Y/N |
| 51 | Does the WTG include electrically driven service Lift? |   | Y/N |
| 52 | Which of the following WTG options are included in this Proposal: |   |   |
| 53 | Weather Condition Monitoring System |   | Y/N |
| 54 | 24/7 Offsite Monitoring (if yes, how many years) |   | Y/N |
| 55 | Icing Detection System |   | Y/N |
| 56 | Corrosion protection category for exposed sections |   | category C1 - C5 |
| **Item** | **WTG Transformer**  | **Responses** |  |
| 1 | *Attach datasheets* |   |   |
| 2 | Manufacturer |   |   |
| 3 | Model Number |   |   |
| 4 | WTG transformer location (up tower, down tower, pad mount) |   |   |
| 5 | Rating / Cooling |   | kVA |
| 6 | Is the transformer Dry-type or oil insulated? |   | Y/N |
| 7 | If wet, what is the oil quantity? |   |   |
|   |   |   |   |
| **Item** | **Wind Monitoring Stations** | **Responses** |   |
| 1 | Type of System to be Used (Met Towers, LIDAR/Sodar, etc.) |   |   |
| 2 | *Attach datasheets* |   |   |
| 3 | Number of towers or LIDAR/Sodar installations |   |   |
| 4 | Tower or LIDAR/Sodar Manufacturer |   |   |
| 5 | Tower or LIDAR/Sodar Model |   |   |
| 6 | Is the tower in accordance to IEC 61400-12? |   |   |
| 7 | Is the data integrated with the WTG OEM SCADA system? |   |   |
| 8 | Is remote monitoring available? |   |   |
| 9 | Provide list of sensors installed and data provided to SCADA system |   |   |
| 10 | What wind heights (i.e. 40m, 60m & 80m) or range of heights will be measured? |   | Y/N |
| 11 | Are met towers guyed or free standing? |   | Y/N |
| 12 | Do the monitoring systems have UPS system? How many hours? |   | Y/N |
|   |   |   |   |