**ANNEXURE MT-4: SEGREGATION OF TELEMETERED POINTS FOR SOLAR GENERATING PLANTS**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Unit** | **Datatype** | **Remarks** |
| **Telemetry from Inverter/IDT\*** | | | |
| Inverter/IDT \*Power | MW | Analog |  |
| Inverter/IDT \* Reactive Power | MVAR | Analog |  |
| Inverter/IDT\* | Boolean | Status |  |
| LVRT trigger\*\* | Boolean | SOE |  |
| HVRT trigger\*\* | Boolean | SOE |  |
| **Plant level Telemetry** | | | |
| Total numbers of Inverters | - | Analog |  |
| No. of Inverters in Service | - | Analog |  |
| Performance Ratio | - | Analog |  |
|  |  |  |  |
| Voltage Control Mode | Boolean | Status |  |
| Voltage Control Set Point (Vref) | Or kV | Analog |  |
| Actual Voltage | kV | Analog |  |
| Slope/Droop - Voltage  Control Mode | - | Analog |  |
| Deadband-VoltageControl Mode | %of nominal  voltage | Analog |  |
|  |  |  |  |
| Constant Reactive Power Control Mode | Boolean | Status |  |
| Constant Reactive Power Control– Set Point | MVAR | Analog |  |
| Constant Reactive Power Control– Actual MVAR | MVAR | Analog |  |
|  |  |  |  |
| Constant Power Factor Mode | Boolean | Status |  |
| Constant Power Factor Control Setpoint | - | Analog |  |
| Constant Power Factor Control -Actual | - | Analog |  |
|  |  |  |  |
| Maximum reactive power  Absorption limit (Q min) | MVAR | Analog |  |
| Maximum reactive power  Injection limit (Q max) | MVAR | Analog |  |
|  |  |  |  |
| Active Power Control mode | Boolean | Status |  |
| Active Power Set Point | MW | Analog |  |
| Active Power UP Ramp Rate | MW/minute | Analog |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Active Power DN Ramp Rate | MW/minute | Analog |  |
|  |  |  |  |
| Frequency Control Mode | Boolean | Status |  |
| Frequency Control Droop | % | Analog |  |
| Frequency Control UP Dead band value | Hz | Analog |  |
| Frequency Control DN  Dead band value | Hz | Analog |  |
|  |  |  |  |
| PPC Inputs from POI | Boolean | Status |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Telemetry from Developer Pooling Station** | | | |
| Active Power | MW | Analog |  |
| Reactive Power | MVAR | Analog |  |
| CB Status | Boolean | Status |  |
| Isolator Status | Boolean | Status |  |
| Bus Voltage | KV | Analog |  |
| Bus Frequency | Hz | Analog |  |
| Sun-rise time | HHMM | Analog |  |
| Sun-set time | HHMM | Analog |  |
| Ambient Air Temperature | OC | Analog | From Weather Station |
| Relative Humidity | % | Analog |
| Air Density | Kg/m3 | Analog |
| Rainfall | Mm | Analog |
| GHI | W/m2 | Analog |
| GI | W/m2 | Analog |
| Cloud Cover\*\*\* | Okta | Analog |

\*In case of string inverter, Inverter Duty Transformer Status and Analog to be taken as the number of m inverters is large

\*\*For LVRT & HVRT trigger status in case of string inverters, LVRT/HVRT trigger status of one string inverter in LV side of each IDT is to be provided.

\*\*\*If Cloud Cover measuring instrument is available otherwise cloud cover data can be taken from Weather Service Provider

**Note:** Developer pooling station shall preferably provide telemetry to the respective SLDC/RLDCs from the Gateway of the Developer Pooling Station. In case direct integration of Gateway is not feasible, telemetry could be provided from Central Control Centre of the Developer. However, in case the telemetry is provided from a Central Control Centre of the Developer, efforts should be made to integrate communication to the nearest wideband node of ISTS for transmitting the data to the respective SLDC/RLDCs over IEC-104.