**Information Request for Preliminary Energy Assessment**

**(Cooling System)**

1. Monthly Utilities Bill for at least 2 years (2019 and 2020) – Electricity, Water, Gas and Diesel
2. Facility Total Gross Floor Area (GFA), Conditioned Floor Area, Age of the building and No. of Floors
3. Total GFA distribution by business area – Hotel, Retail, Meeting Rooms, Casino, etc
4. Hotel Rooms Quantity
5. Monthly Hotel Occupancy in % and Occupied Rooms
6. Meeting Rooms
   1. Qty and Floor Area
   2. Occupancy % on monthly basis
7. Food & Beverage
   1. Qty of Restaurants, Table Count and Floor Area
   2. Estimated number of meals served on monthly basis
   3. Operating Hours
8. Total number of Employees
9. Chilled Water Plant Information:

**Chillers**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Type – Air Cooled / Water Cooled | Capacity (RT) | Compressor Electrical KW | Efficiency KW/Ton | Year of Installation | CHW Flow (l/s) | CW Flow (l/s) | Qty |
| Water-Cooled | 750 |  |  | 2016 | 80.43 | 142 | 7 |

**Chilled Water Pumps**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Quantity | Head (m) | Flow (l/s) | Efficiency (%) | Brand | Year of Installation |
| 7 |  |  |  | PENTAIR | 2016 |

**Condenser Water Pumps**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Quantity | Head (m) | Flow (l/s) | Efficiency (%) | Brand | Year of Installation |
| 7 |  |  |  | PENTAIR | 2016 |

**Cooling Towers**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Quantity | Capacity RT | Fan Motor  Qty and KW per Cooling Tower | Brand | Design Approach Temperature (Deg C) | Year of Installation |
| 7 |  |  | Thermal Cell |  | 2016 |

Other Design / Operating Parameters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CHW Delta “T” | CW Delta “T” | Daily Operating Cooling Load – Min/Max | Chiller Operating Sequence | Cooling Tower Cycle of Concentration (COC) |
| 10 Deg F (54/44) | Fixed – 86/96 Deg F |  |  |  |

1. Latest Daily Operation Log Sheet / Check List of Chillers, Pumps and Cooling Towers with data (temperature, current, pressure, etc) – One Week
2. Few Images of Chilled Water Plant that shows chillers, pumps, cooling towers, pipes, valves and fittings.
3. Few images of chilled water plant main electrical distribution board for chillers, pumps and cooling towers
4. Building Management System Installed
   1. Brand
   2. Few Screenshots of chilled water system from the BMS
   3. Screenshots of Chiller High Level Interface Data
   4. One to Two months of Chiller Plant Operating Data extracted from BMS
5. Do these equipment operate through Variable Frequency Drive (VFD)?
   1. Chilled Water Pump
   2. Condenser Water Pump
   3. Cooling Tower Fan
   4. Chillers