CASE STUDY

You will find two csv files attached with this case study. *DAM\_prices\_2022.csv* contains hourly prices and *RTM\_prices\_2022.csv* contains 15-min interval prices from Jan 1 to Jan 31, 2022 with the following columns:

|  |  |
| --- | --- |
| **Column Name** | **Description** |
| Delivery Date | Date in mm/dd/yyyy format |
| Delivery Hour | Hour of day from 1 to 24; Hour 1 is 00:00 & Hour 24 is 23:00 |
| Delivery Interval | 15-min interval of hour from 1 to 4 (only for RTM Prices) |
| Settlement Point | Name of the location |
| Settlement Point Price | Price in $/MWh |

You need to do the following tasks –

1. Create a csv file containing DAM & RTM prices at hourly intervals from Jan 1 to Jan 31, 2022 for HB\_NORTH. The csv file should be named ‘task\_1.csv’ with only 3 columns.

|  |  |
| --- | --- |
| **Column Name** | **Description** |
| date | Datetime in ‘yyyy-mm-dd hh:mm:ss’ format starting from 2022-01-01 00:00:00 to 2022-12-31 23:00:00 in 1 hour increments |
| dam | Hourly DAM price rounded up to 2 decimal digits |
| rtm | Hourly RTM price rounded up to 2 decimal digits |

Hourly RTM price is calculated by averaging the four 15-min interval RTM price for a given hour.

1. Create a csv file containing DAM & RTM prices at 15-min intervals from Jan 1 to Jan 31, 2022 for HB\_NORTH. The csv file should be named ‘task\_2.csv’ with only 3 columns.

|  |  |
| --- | --- |
| **Column Name** | **Description** |
| date | Datetime in ‘yyyy-mm-dd hh:mm:ss’ format starting from 2022-01-01 00:00:00 to 2022-12-31 23:00:00 in 15 min increments |
| dam | 15-min DAM price rounded up to 2 decimal digits |
| rtm | 15-min RTM price rounded up to 2 decimal digits |

15-min DAM price is the same as hourly DAM price for all four 15-min intervals in a given hour.