

EE4211 Group Project

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Appendix of Question 1

Question 1.1

Details of the decreasing meters

```
In [1]: import numpy as np
from datetime import timedelta
import pandas as pd
from pandas import DataFrame
from datetime import date
import warnings
import matplotlib.pyplot as plt
from matplotlib.pyplot import MultipleLocator
```

```
In [12]: def detail_decrease(df):
    grouped = df.groupby(['dataid'])
    decrease_meter_id = []
    for key, group in grouped:
        value = group['meter_value']
        diff = value.diff()
        decrease_time_id = np.where(diff < 0)[0]
        last_time_id = np.where(diff < 0)[0]-1
        if len(decrease_time_id):
            decrease_meter_id.append(key)
            begin_time = group['localminute'].values[last_time_id]
            end_time = group['localminute'].values[decrease_time_id]
            detail = []
            for i in range(len(begin_time)):
                detail.append(str(begin_time[i])+'--'+str(end_time[i]))
            print("The number of meterID which has decreased: "+str(key))
            print("Occurring periods: "+", ".join(detail)+"\n")
    return decrease_meter_id
```

```
In [13]: df = pd.read_csv('dataport-export_gas_oct2015-mar2016.csv')
warnings.filterwarnings("ignore")
df['localminute'] = df['localminute'].astype(str).str[:19]
df['localminute'] = pd.to_datetime(df['localminute'])
df['year'] = df['localminute'].dt.year
df['month'] = df['localminute'].dt.month
```

```
In [14]: result = detail_decrease(df)
```

The number of meterID which has decreased: 35

Occurring periods: 2015-10-20T08:53:16.000000000--2015-10-20T09:00:12.000000000

The number of meterID which has decreased: 77

Occurring periods: 2015-10-20T20:07:57.000000000--2015-10-20T20:20:55.000000000

The number of meterID which has decreased: 94

Occurring periods: 2015-11-01T01:10:07.000000000--2015-11-01T01:11:10.000000000 , 2015-11-01T01:13:09.000000000--2015-11-01T01:17:53.000000000 , 2015-11-01T01:19:10.000000000--2015-11-01T01:23:12.000000000 , 2016-01-16T10:23:19.000000000--2016-01-16T10:23:43.000000000 , 2016-01-18T11:19:30.000000000--2016-01-18T11:19:47.000000000 , 2016-01-18T11:26:27.000000000--2016-01-18T11:26:52.000000000

The number of meterID which has decreased: 483

Occurring periods: 2015-10-21T00:08:56.000000000--2015-10-21T00:18:54.000000000

The number of meterID which has decreased: 484

Occurring periods: 2015-11-01T01:15:20.000000000--2015-11-01T01:18:29.000000000 , 2015-11-01T01:27:18.000000000--2015-11-01T01:34:43.000000000 , 2015-11-01T01:38:15.000000000--2015-11-01T01:40:00.000000000 , 2015-11-01T01:42:34.000000000--2015-11-01T01:44:34.000000000 , 2015-11-01T01:46:47.000000000--2015-11-01T01:48:31.000000000 , 2015-11-01T01:49:06.000000000--2015-11-01T01:55:28.000000000 , 2016-03-05T00:00:00.000000000--2016-03-05T00:01:58.000000000 , 2016-03-05T01:42:41.000000000--2016-03-05T01:43:22.000000000 , 2016-03-05T01:56:57.000000000--2016-03-05T01:57:57.000000000

The number of meterID which has decreased: 1042

Occurring periods: 2015-10-07T14:24:06.000000000--2015-10-07T14:32:08.000000000

The number of meterID which has decreased: 1086

Occurring periods: 2015-11-01T01:29:24.000000000--2015-11-01T01:32:25.000000000

The number of meterID which has decreased: 1185

Occurring periods: 2015-10-17T10:50:54.000000000--2015-10-17T10:51:09.000000000 , 2015-10-17T10:59:49.000000000--2015-10-17T11:08:06.000000000 , 2015-10-17T11:43:41.000000000--2015-10-17T11:47:03.000000000 , 2015-10-17T12:31:41.000000000--2015-10-17T12:33:57.000000000 , 2015-10-17T13:03:51.000000000--2015-10-17T13:27:01.000000000 , 2015-10-17T13:37:59.000000000--2015-10-17T13:40:02.000000000 , 2015-10-17T16:50:47.000000000--2015-10-17T17:12:56.000000000 , 2015-10-17T23:53:45.000000000--2015-10-17T23:59:04.000000000 , 2015-10-20T12:21:27.000000000--2015-10-20T12:29:48.000000000 , 2015-10-20T12:40:18.000000000--2015-10-20T13:49:08.000000000 , 2015-12-07T17:06:07.000000000--2015-12-07T17:19:59.000000000 , 2015-12-07T18:16:16.000000000--2015-12-07T18:21:50.000000000 , 2015-12-07T19:52:20.000000000--2015-12-07T19:58:12.000000000 , 2015-12-07T20:08:14.000000000--2015-12-07T20:12:12.000000000 , 2015-12-07T20:33:14.000000000--2015-12-07T20:34:59.000000000 , 2015-12-07T20:38:11.000000000--2015-12-07T21:20:06.000000000 , 2015-12-07T21:37:09.000000000--2015-12-07T21:58:58.000000000 , 2015-12-07T22:06:15.000000000--2015-12-07T23:09:55.000000000 , 2015-12-08T01:03:05.000000000--2015-12-08T01:05:02.000000000 , 2015-12-08T01:50:08.000000000--2015-12-08T01:52:51.000000000 , 2015-12-08T01:56:11.000000000--2015-12-08T02:06:59.000000000 , 2015-12-08T02:10:16.000000000--2015-12-08T02:15:55.000000000 , 2015-12-08T03:56:18.000000000--2015-12-08T03:58:05.000000000 , 2015-12-08T04:38:06.000000000--2015-12-08T04:49:06.000000000 , 2015-12-08T05:55:04.000000000--2015-12-08T06:15:55.000000000 , 2015-12-08T06:32:14.000000000--2015-12-08T06:35:56.000000000 , 2015-12-08T07:04:24.000000000--2015-12-08T07:07:52.000000000 , 2015-12-08T07:09:25.000000000--2015-12-08T07:17:48.000000000 , 2015-12-08T07:41:18.000000000--2015-12-08T07:51:59.000000000 , 2015-12-08T08:12:17.000000000--2015-12-08T08:20:00.000000000 , 2015-12-08T08:20:16.000000000--2015-12-08T08:54:12.000000000 , 2015-12-08T09:52:07.000000000--2015-12-08T10:04:00.000000000 , 2015-12-08T10:27:14.000000000--2015-12-08T11:06:49.000000000 , 2015-12-08T12:21:20.000000000--2015-12-08T12:24:05.000000000 , 2015-12-08T12:33:17.000000000--2015-12-08T12:41:09.000000000 , 2015-12-08T13:28:11.000000000--2015-12-08T13:35:00.000000000 , 2015-12-08T13:35:09.000000000--2015-12-08T13:38:00.000000000 , 2015-12-08T13:48:07.000000000--2015-12-08T13:52:00.000000000 , 2015-12-08T13:59:03.000000000--2015-12-08T14:06:04.000000000 , 2015-12-08T16:34:20.000000000--2015-12-08T17:02:09.000000000 , 2015-12-08T17:41:12.000000000--2015-12-08T17:43:03.000000000 , 2015-12-08T17:43:11.000000000--2015-12-08T17:48:00.000000000 , 2015-12-08T19:17:18.000000000--2015-12-08T19:17:50.000000000 , 2015-12-08T19:31:16.0

00000000--2015-12-08T19:45:50.000000000 , 2015-12-08T21:00:19.000000000--2015-12-08T21:18:05.000000000 , 2015-12-08T21:44:13.000000000--2015-12-08T21:48:00.000000000 , 2015-12-08T22:08:10.000000000--2015-12-08T22:14:01.000000000 , 2015-12-08T23:00:12.000000000--2015-12-08T23:07:58.000000000 , 2015-12-08T23:14:14.000000000--2015-12-08T23:14:56.000000000 , 2015-12-09T01:30:13.000000000--2015-12-09T01:34:09.000000000 , 2015-12-09T01:43:07.000000000--2015-12-09T01:50:06.000000000 , 2015-12-09T02:46:07.000000000--2015-12-09T02:57:58.000000000 , 2015-12-09T05:13:15.000000000--2015-12-09T05:21:00.000000000 , 2015-12-09T05:47:11.000000000--2015-12-09T06:06:01.000000000 , 2015-12-09T08:44:21.000000000--2015-12-09T09:46:11.000000000 , 2015-12-09T10:05:05.000000000--2015-12-09T10:27:03.000000000 , 2015-12-09T10:44:10.000000000--2015-12-09T10:49:02.000000000 , 2015-12-09T13:21:16.000000000--2015-12-09T13:31:02.000000000 , 2015-12-09T13:33:20.000000000--2015-12-09T13:35:02.000000000 , 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2015-12-12T06:43:10.000000000--2015-12-12T07:30:44.000000000 , 2015-12-12T07:48:24.000000000--2015-12-12T07:53:42.000000000 , 2015-12-12T08:08:20.000000000--2015-12-12T08:19:52.000000000 , 2015-12-12T08:37:15.000000000--2015-12-12T08:37:55.000000000 , 2015-12-12T11:53:23.000000000--2015-12-12T12:23:52.000000000 , 2015-12-12T13:18:20.000000000--2015-12-12T13:39:07.000000000 , 2015-12-12T14:21:09.000000000--2015-12-12T14:39:58.000000000 , 2015-12-12T14:47:08.000000000--2015-12-12T15:18:53.000000000 , 2015-12-12T16:30:23.000000000--2015-12-12T16:44:51.000000000 , 2015-12-12T17:19:13.000000000--2015-12-12T17:31:03.000000000 , 2015-12-12T17:34:19.000000000--2015-12-12T18:38:54.000000000 , 2015-12-12T18:47:02.000000000--2015-12-12T19:49:47.000000000 , 2015-12-12T21:13:15.000000000--2015-12-12T21:17:55.000000000

, 2015-12-12T22:27:11.000000000--2015-12-12T22:57:55.000000000 , 2015-12-12T23:31:10.000000000--2015-12-12T23:53:49.000000000 , 2015-12-13T01:25:15.000000000--2015-12-13T01:27:54.000000000

The number of meterID which has decreased: 1507

Occurring periods: 2015-11-01T01:35:57.000000000--2015-11-01T01:39:26.000000000 , 2015-11-01T01:56:42.000000000--2015-11-01T01:57:27.000000000

The number of meterID which has decreased: 1556

Occurring periods: 2015-10-17T12:00:52.000000000--2015-10-17T12:01:05.000000000 , 2015-11-01T01:23:40.000000000--2015-11-01T01:30:39.000000000 , 2015-12-08T00:44:31.000000000--2015-12-08T02:36:42.000000000 , 2015-12-08T02:42:31.000000000--2015-12-08T02:57:41.000000000 , 2015-12-08T05:14:31.000000000--2015-12-08T05:15:42.000000000 , 2015-12-08T16:11:31.000000000--2015-12-08T18:25:41.000000000 , 2015-12-09T08:52:30.000000000--2015-12-09T09:13:39.000000000 , 2015-12-09T10:00:30.000000000--2015-12-09T11:39:39.000000000 , 2015-12-10T01:13:29.000000000--2015-12-10T02:54:39.000000000 , 2015-12-10T05:35:30.000000000--2015-12-10T06:21:38.000000000 , 2015-12-10T17:20:28.000000000--2015-12-10T18:33:37.000000000 , 2015-12-11T02:00:29.000000000--2015-12-11T02:14:36.000000000

The number of meterID which has decreased: 1718

Occurring periods: 2015-10-20T16:26:59.000000000--2015-10-20T16:27:02.000000000 , 2015-10-20T19:36:08.000000000--2015-10-20T19:38:11.000000000 , 2015-10-20T19:39:12.000000000--2015-10-20T19:44:07.000000000 , 2015-10-20T20:11:04.000000000--2015-10-20T20:16:07.000000000

The number of meterID which has decreased: 1790

Occurring periods: 2015-10-20T16:07:21.000000000--2015-10-20T16:12:26.000000000

The number of meterID which has decreased: 1801

Occurring periods: 2015-10-20T07:41:06.000000000--2015-10-20T07:52:02.000000000

The number of meterID which has decreased: 2129

Occurring periods: 2015-11-01T01:22:51.000000000--2015-11-01T01:24:54.000000000 , 2015-11-01T01:42:46.000000000--2015-11-01T01:51:54.000000000 , 2015-11-01T01:52:43.000000000--2015-11-01T01:55:52.000000000

The number of meterID which has decreased: 2335

Occurring periods: 2015-10-20T18:22:35.000000000--2015-10-20T18:23:32.000000000 , 2015-12-08T16:30:32.000000000--2015-12-08T16:33:26.000000000 , 2015-12-08T17:30:18.000000000--2015-12-08T17:53:22.000000000 , 2015-12-09T06:34:20.000000000--2015-12-09T07:27:14.000000000 , 2015-12-11T23:45:34.000000000--2015-12-11T23:52:27.000000000

The number of meterID which has decreased: 2449

Occurring periods: 2015-10-17T15:37:12.000000000--2015-10-17T15:44:26.000000000 , 2015-10-17T17:50:12.000000000--2015-10-17T17:58:26.000000000 , 2015-12-07T17:02:33.000000000--2015-12-07T17:07:19.000000000 , 2015-12-07T18:04:34.000000000--2015-12-07T18:09:19.000000000 , 2015-12-07T18:28:34.000000000--2015-12-07T18:33:20.000000000 , 2015-12-07T18:59:34.000000000--2015-12-07T19:05:20.000000000 , 2015-12-07T20:02:35.000000000--2015-12-07T20:03:20.000000000 , 2015-12-07T20:07:34.000000000--2015-12-07T20:09:20.000000000 , 2015-12-07T21:13:34.000000000--2015-12-07T21:15:20.000000000 , 2015-12-07T21:42:34.000000000--2015-12-07T21:50:20.000000000 , 2015-12-07T21:50:34.000000000--2015-12-07T21:55:20.000000000 , 2015-12-07T22:14:34.000000000--2015-12-07T22:23:20.000000000 , 2015-12-07T23:36:34.000000000--2015-12-07T23:44:20.000000000 , 2015-12-08T00:21:34.000000000--2015-12-08T00:56:20.000000000 , 2015-12-08T02:21:34.000000000--2015-12-08T02:35:19.000000000 , 2015-12-08T02:54:34.000000000--2015-12-08T03:10:21.000000000 , 2015-12-08T04:04:34.000000000--2015-12-08T04:15:20.000000000 , 2015-12-08T05:06:34.000000000--2015-12-08T05:16:20.000000000 , 2015-12-08T05:35:34.000000000--2015-12-08T05:38:20.000000000 , 2015-12-08T06:14:34.000000000--2015-12-08T06:25:20.000000000 , 2015-12-08T06:36:34.000000000--2015-12-08T06:39:20.000000000 , 2015-12-08T07:13:35.000000000--2015-12-08T07:17:20.000000000 , 2015-12-08T08:53:35.000000000--2015-12-08T08:55:20.000000000 , 2015-12-08T08:59:34.000000000--2015-12-08T09:02:20.000000000 , 2015-12-08T10:25:34.000000000--2015-12-08T10:39:20.000000000 , 2015-12-08T11:32:35.000000000--2015-12-08T11:46:20.000000000 , 2015-12-08T12:20:35.000000000--2015-12-08T12:24:21.000000000 , 2015-12-08T12:40:35.000000000--2015-12-08T12:45:20.000000000 , 2015-12-08T13:05:34.000000000--2015-12-08T13:07:20.000000000 , 2015-12-08T13:29:35.000000000--2015-12-08T1

3:34:20.000000000 , 2015-12-08T14:13:35.000000000--2015-12-08T14:16:20.000000000 , 2015-12-08T15:43:35.000000000--2015-12-08T16:53:20.000000000 , 2015-12-08T18:21:35.000000000--2015-12-08T18:34:20.000000000 , 2015-12-08T18:44:35.000000000--2015-12-08T19:16:21.000000000 , 2015-12-08T20:56:35.000000000--2015-12-08T21:03:20.000000000 , 2015-12-08T21:59:35.000000000--2015-12-08T22:07:20.000000000 , 2015-12-09T00:17:36.000000000--2015-12-09T01:03:20.000000000 , 2015-12-09T03:21:35.000000000--2015-12-09T04:00:21.000000000 , 2015-12-09T04:08:35.000000000--2015-12-09T04:12:21.000000000 , 2015-12-09T06:16:35.000000000--2015-12-09T07:13:20.000000000 , 2015-12-09T07:20:36.000000000--2015-12-09T07:45:20.000000000 , 2015-12-09T11:00:35.000000000--2015-12-09T11:05:20.000000000 , 2015-12-09T11:26:35.000000000--2015-12-09T11:27:20.000000000 , 2015-12-09T12:19:36.000000000--2015-12-09T12:43:20.000000000 , 2015-12-09T13:29:35.000000000--2015-12-09T13:35:21.000000000 , 2015-12-09T16:43:36.000000000--2015-12-09T16:55:20.000000000 , 2015-12-09T19:11:36.000000000--2015-12-09T19:57:19.000000000 , 2015-12-09T22:05:35.000000000--2015-12-09T22:36:20.000000000 , 2015-12-09T23:05:36.000000000--2015-12-10T00:25:19.000000000 , 2015-12-10T00:50:37.000000000--2015-12-10T00:58:19.000000000 , 2015-12-10T01:26:36.000000000--2015-12-10T01:48:19.000000000 , 2015-12-10T03:01:36.000000000--2015-12-10T03:24:20.000000000 , 2015-12-10T04:38:36.000000000--2015-12-10T05:00:20.000000000 , 2015-12-10T06:11:37.000000000--2015-12-10T06:45:20.000000000 , 2015-12-10T07:13:36.000000000--2015-12-10T07:25:19.000000000 , 2015-12-10T08:33:37.000000000--2015-12-10T08:54:20.000000000 , 2015-12-10T10:43:36.000000000--2015-12-10T11:09:19.000000000 , 2015-12-10T12:58:36.000000000--2015-12-10T13:01:20.000000000 , 2015-12-10T15:32:37.000000000--2015-12-10T15:40:20.000000000 , 2015-12-10T20:09:37.000000000--2015-12-10T21:21:20.000000000 , 2015-12-10T22:00:36.000000000--2015-12-10T22:34:20.000000000 , 2015-12-10T23:22:37.000000000--2015-12-10T23:31:20.000000000 , 2015-12-11T00:05:37.000000000--2015-12-11T01:33:20.000000000 , 2015-12-11T01:41:37.000000000--2015-12-11T01:58:19.000000000 , 2015-12-11T02:14:36.000000000--2015-12-11T02:22:20.000000000 , 2015-12-11T03:16:37.000000000--2015-12-11T03:27:20.000000000 , 2015-12-11T04:40:36.000000000--2015-12-11T04:49:20.000000000 , 2015-12-11T05:16:37.000000000--2015-12-11T05:53:20.000000000 , 2015-12-11T06:02:36.000000000--2015-12-11T06:23:19.000000000 , 2015-12-11T06:51:37.000000000--2015-12-11T07:34:20.000000000 , 2015-12-11T08:08:37.000000000--2015-12-11T08:34:19.000000000 , 2015-12-11T09:41:37.000000000--2015-12-11T10:18:20.000000000 , 2015-12-11T10:33:37.000000000--2015-12-11T10:54:20.000000000 , 2015-12-11T10:54:38.000000000--2015-12-11T11:07:19.000000000 , 2015-12-11T11:14:38.000000000--2015-12-11T11:26:19.000000000 , 2015-12-11T12:41:37.000000000--2015-12-11T13:14:20.000000000 , 2015-12-11T14:16:37.000000000--2015-12-11T14:51:19.000000000 , 2015-12-11T15:17:37.000000000--2015-12-11T15:22:20.000000000 , 2015-12-11T17:16:37.000000000--2015-12-11T17:42:19.000000000 , 2015-12-11T18:34:38.000000000--2015-12-11T18:54:20.000000000 , 2015-12-11T20:49:38.000000000--2015-12-11T21:19:19.000000000 , 2015-12-11T22:16:38.000000000--2015-12-11T22:25:20.000000000 , 2015-12-12T01:12:38.000000000--2015-12-12T01:35:20.000000000 , 2015-12-12T06:02:38.000000000--2015-12-12T06:15:19.000000000 , 2015-12-12T06:57:37.000000000--2015-12-12T07:11:19.000000000 , 2015-12-12T12:01:38.000000000--2015-12-12T12:47:19.000000000 , 2015-12-12T12:47:38.000000000--2015-12-12T13:04:20.000000000 , 2015-12-12T15:09:38.000000000--2015-12-12T16:17:20.000000000 , 2015-12-12T20:09:38.000000000--2015-12-12T20:32:20.000000000 , 2015-12-12T20:43:38.000000000--2015-12-12T21:03:19.000000000 , 2015-12-12T22:38:39.000000000--2015-12-12T23:01:19.000000000 , 2015-12-12T23:56:39.000000000--2015-12-13T00:27:19.000000000 , 2015-12-13T01:11:39.000000000--2015-12-13T01:34:19.000000000

The number of meterID which has decreased: 3134

Occurring periods: 2015-10-20T12:42:53.000000000--2015-10-20T13:51:35.000000000 , 2015-12-08T06:51:33.000000000--2015-12-08T06:56:40.000000000 , 2015-12-08T14:48:31.000000000--2015-12-08T14:59:41.000000000 , 2015-12-09T04:33:25.000000000--2015-12-09T04:55:32.000000000 , 2015-12-09T19:29:39.000000000--2015-12-09T20:53:40.000000000 , 2015-12-09T23:36:41.000000000--2015-12-10T00:51:37.000000000 , 2015-12-10T03:28:43.000000000--2015-12-10T03:59:37.000000000 , 2015-12-10T14:39:41.000000000--2015-12-10T14:50:31.000000000 , 2015-12-10T18:42:37.000000000--2015-12-10T18:53:33.000000000 , 2015-12-10T20:04:45.000000000--2015-12-10T20:28:34.000000000 , 2015-12-10T21:37:37.000000000--2015-12-10T23:05:33.000000000 , 2015-12-11T00:45:41.000000000--2015-12-11T00:46:36.000000000 , 2015-12-11T05:07:39.000000000--2015-12-11T05:49:42.000000000 , 2015-12-11T20:17:38.000000000--2015-12-11T20:51:26.000000000 , 2015-12-11T21:11:46.000000000--2015-12-11T21:23:33.000000000 , 2015-12-12T08:05:27.000000000--2015-12-12T08:29:25.000000000 , 2015-12-12T11:43:27.000000000--2015-12-12T12:51:31.000000000 , 2015-12-12T16:57:37.000000000--2015-12-12T17:10:28.000000000

The number of meterID which has decreased: 3527

Occurring periods: 2015-11-01T01:08:08.000000000--2015-11-01T01:11:57.000000000

The number of meterID which has decreased: 3544

Occurring periods: 2015-12-07T18:44:37.000000000--2015-12-07T19:49:52.000000000 , 2015-12-08T01:37:35.000000000--2015-12-08T04:34:48.000000000 , 2015-12-08T06:07:39.00000000--2015-12-08T07:03:42.000000000 , 2015-12-08T12:41:29.000000000--2015-12-08T13:58:42.000000000 , 2015-12-08T14:23:38.000000000--2015-12-08T14:29:36.000000000 , 2015-12-08T14:31:39.000000000--2015-12-08T15:22:47.000000000 , 2015-12-08T23:35:39.000000000--2015-12-09T08:24:43.000000000 , 2015-12-09T13:47:29.000000000--2015-12-09T14:40:43.000000000 , 2015-12-10T07:29:24.000000000--2015-12-10T07:57:39.000000000 , 2015-12-10T08:55:46.000000000--2015-12-10T09:48:44.000000000 , 2015-12-10T10:55:29.000000000--2015-12-10T11:41:40.000000000 , 2015-12-10T14:09:37.000000000--2015-12-10T14:38:55.000000000 , 2015-12-10T14:39:24.000000000--2015-12-10T16:45:36.000000000 , 2015-12-11T02:01:36.000000000--2015-12-11T02:04:40.000000000 , 2015-12-11T07:51:30.000000000--2015-12-11T12:08:41.000000000 , 2015-12-11T14:51:35.000000000--2015-12-11T15:24:46.000000000 , 2015-12-11T18:39:42.000000000--2015-12-11T18:44:36.000000000 , 2015-12-12T16:59:24.00000000--2015-12-12T18:48:35.000000000

The number of meterID which has decreased: 3893

Occurring periods: 2015-11-01T01:14:05.000000000--2015-11-01T01:15:36.000000000 , 2015-11-01T01:20:21.000000000--2015-11-01T01:31:36.000000000

The number of meterID which has decreased: 4031

Occurring periods: 2015-10-08T06:52:37.000000000--2015-10-08T07:06:58.000000000 , 2015-10-11T17:33:18.000000000--2015-10-11T17:51:08.000000000 , 2015-10-12T12:42:57.00000000--2015-10-12T13:03:07.000000000 , 2015-10-12T17:21:03.000000000--2015-10-12T17:22:02.000000000 , 2015-10-12T18:06:57.000000000--2015-10-12T18:12:04.000000000 , 2015-10-15T06:29:12.000000000--2015-10-15T06:39:51.000000000 , 2015-10-15T06:41:16.000000000--2015-10-15T06:57:47.000000000 , 2015-10-19T07:07:13.000000000--2015-10-19T07:17:44.000000000 , 2016-02-26T06:42:24.000000000--2016-02-26T06:45:06.000000000 , 2016-03-08T21:18:04.000000000--2016-03-08T21:18:50.000000000 , 2016-03-10T03:57:10.000000000--2016-03-10T04:00:53.000000000 , 2016-03-10T21:01:10.000000000--2016-03-10T21:02:50.000000000 , 2016-03-11T21:12:46.000000000--2016-03-11T21:16:57.000000000 , 2016-03-17T20:09:39.000000000--2016-03-17T20:12:36.000000000 , 2016-03-27T08:59:54.000000000--2016-03-27T09:02:26.000000000 , 2016-03-28T14:21:23.000000000--2016-03-28T14:22:29.000000000

The number of meterID which has decreased: 4193

Occurring periods: 2015-11-01T01:08:17.000000000--2015-11-01T01:23:17.000000000

The number of meterID which has decreased: 4514

Occurring periods: 2015-10-17T09:53:41.000000000--2015-10-17T09:53:59.000000000 , 2015-10-17T10:16:45.000000000--2015-10-17T10:16:56.000000000 , 2015-10-17T11:24:56.00000000--2015-10-17T11:30:02.000000000 , 2015-10-17T12:44:51.000000000--2015-10-17T12:46:06.000000000 , 2015-10-17T20:50:47.000000000--2015-10-17T20:53:08.000000000 , 2015-10-17T21:42:46.000000000--2015-10-17T21:44:06.000000000 , 2015-10-17T22:06:42.000000000--2015-10-17T22:07:54.000000000 , 2015-10-20T10:21:02.000000000--2015-10-20T10:28:59.000000000 , 2015-10-20T12:21:08.000000000--2015-10-20T12:22:04.000000000 , 2015-10-20T14:58:08.000000000--2015-10-20T15:14:05.000000000 , 2015-10-20T16:21:04.000000000--2015-10-20T16:32:02.000000000 , 2015-10-20T17:47:54.000000000--2015-10-20T17:49:57.000000000 , 2015-10-20T18:06:57.000000000--2015-10-20T18:09:52.000000000 , 2015-11-01T01:30:52.000000000--2015-11-01T01:40:05.000000000 , 2015-12-07T16:37:10.000000000--2015-12-07T16:41:04.000000000 , 2015-12-07T16:45:03.000000000--2015-12-07T17:02:07.000000000 , 2015-12-07T18:43:52.000000000--2015-12-07T19:08:09.000000000 , 2015-12-07T19:38:57.00000000--2015-12-07T19:45:02.000000000 , 2015-12-07T20:23:03.000000000--2015-12-07T20:40:59.000000000 , 2015-12-07T21:40:57.000000000--2015-12-07T21:42:12.000000000 , 2015-12-07T21:48:01.000000000--2015-12-07T21:48:15.000000000 , 2015-12-07T22:34:54.000000000--2015-12-07T22:39:09.000000000 , 2015-12-07T22:47:48.000000000--2015-12-07T22:50:09.000000000 , 2015-12-08T01:05:05.000000000--2015-12-08T01:09:05.000000000 , 2015-12-08T03:13:49.000000000--2015-12-08T03:23:11.000000000 , 2015-12-08T03:46:52.000000000--2015-12-08T03:57:02.000000000 , 2015-12-08T03:59:56.000000000--2015-12-08T04:11:02.000000000 , 2015-12-08T04:32:03.000000000--2015-12-08T04:43:54.000000000 , 2015-12-08T05:06:08.000000000--2015-12-08T05:08:00.000000000 , 2015-12-08T05:34:03.000000000--2015-12-08T05:37:06.000000000 , 2015-12-08T06:04:57.000000000--2015-12-08T06:30:18.000000000 , 2015-12-08T06:30:57.000000000--2015-12-08T06:34:20.000000000 , 2015-12-08T06:58:55.00000000--2015-12-08T07:33:10.000000000 , 2015-12-08T08:10:56.000000000--2015-12-08T08:11:00.000000000

4.000000000 , 2015-12-08T08:21:00.000000000--2015-12-08T08:46:57.000000000 , 2015-12-08T09:51:01.000000000--2015-12-08T09:54:07.000000000 , 2015-12-08T10:16:57.000000000--2015-12-08T10:21:14.000000000 , 2015-12-08T11:20:52.000000000--2015-12-08T11:46:11.000000000 , 2015-12-08T12:44:58.000000000--2015-12-08T12:48:58.000000000 , 2015-12-08T13:13:07.000000000--2015-12-08T13:18:01.000000000 , 2015-12-08T18:22:59.000000000--2015-12-08T18:24:10.000000000 , 2015-12-08T18:31:03.000000000--2015-12-08T18:44:12.000000000 , 2015-12-08T18:56:03.000000000--2015-12-08T18:58:14.000000000 , 2015-12-08T19:09:53.000000000--2015-12-08T19:10:20.000000000 , 2015-12-08T19:19:51.000000000--2015-12-08T19:34:11.000000000 , 2015-12-08T20:55:59.000000000--2015-12-08T21:09:56.000000000 , 2015-12-08T21:45:07.000000000--2015-12-08T21:47:52.000000000 , 2015-12-08T22:01:12.000000000--2015-12-08T22:07:04.000000000 , 2015-12-08T22:25:03.000000000--2015-12-08T22:25:06.000000000 , 2015-12-08T22:45:02.000000000--2015-12-08T23:02:17.000000000 , 2015-12-09T00:32:53.000000000--2015-12-09T01:12:04.000000000 , 2015-12-09T01:49:08.000000000--2015-12-09T02:08:01.000000000 , 2015-12-09T03:00:00.000000000--2015-12-09T03:04:12.000000000 , 2015-12-09T03:33:54.000000000--2015-12-09T03:56:11.000000000 , 2015-12-09T05:48:03.000000000--2015-12-09T05:57:58.000000000 , 2015-12-09T06:20:11.000000000--2015-12-09T06:21:59.000000000 , 2015-12-09T07:13:00.000000000--2015-12-09T07:27:19.000000000 , 2015-12-09T08:08:57.000000000--2015-12-09T08:17:08.000000000 , 2015-12-09T09:05:49.000000000--2015-12-09T09:09:58.000000000 , 2015-12-09T10:21:07.000000000--2015-12-09T10:29:00.000000000 , 2015-12-09T11:19:04.000000000--2015-12-09T11:53:19.000000000 , 2015-12-09T12:41:54.000000000--2015-12-09T13:17:04.000000000 , 2015-12-09T13:49:56.000000000--2015-12-09T14:17:55.000000000 , 2015-12-09T15:28:04.000000000--2015-12-09T15:29:12.000000000 , 2015-12-09T16:33:55.000000000--2015-12-09T17:30:03.000000000 , 2015-12-09T17:41:55.000000000--2015-12-09T17:42:59.000000000 , 2015-12-09T19:29:03.000000000--2015-12-09T19:41:12.000000000 , 2015-12-09T20:14:00.000000000--2015-12-09T20:19:20.000000000 , 2015-12-09T22:02:59.000000000--2015-12-09T22:11:03.000000000 , 2015-12-09T23:22:07.000000000--2015-12-09T23:33:06.000000000 , 2015-12-10T00:44:52.000000000--2015-12-10T01:00:10.000000000 , 2015-12-10T01:08:54.000000000--2015-12-10T01:14:09.000000000 , 2015-12-10T02:17:59.000000000--2015-12-10T02:19:03.000000000 , 2015-12-10T05:35:50.000000000--2015-12-10T05:39:08.000000000 , 2015-12-10T07:14:09.000000000--2015-12-10T07:18:59.000000000 , 2015-12-10T07:20:08.000000000--2015-12-10T07:21:56.000000000 , 2015-12-10T08:15:02.000000000--2015-12-10T08:27:10.000000000 , 2015-12-10T08:51:00.000000000--2015-12-10T08:53:19.000000000 , 2015-12-10T11:04:01.000000000--2015-12-10T11:18:56.000000000 , 2015-12-10T11:52:09.000000000--2015-12-10T11:55:04.000000000 , 2015-12-10T13:30:59.000000000--2015-12-10T13:35:12.000000000 , 2015-12-10T14:47:59.000000000--2015-12-10T15:08:00.000000000 , 2015-12-10T15:31:06.000000000--2015-12-10T15:35:58.000000000 , 2015-12-10T16:07:08.000000000--2015-12-10T16:18:09.000000000 , 2015-12-10T17:41:58.000000000--2015-12-10T17:59:09.000000000 , 2015-12-10T19:13:58.000000000--2015-12-10T19:19:00.000000000 , 2015-12-10T19:49:10.000000000--2015-12-10T19:54:01.000000000 , 2015-12-10T20:04:09.000000000--2015-12-10T20:20:05.000000000 , 2015-12-10T21:08:04.000000000--2015-12-10T21:16:17.000000000 , 2015-12-10T21:27:59.000000000--2015-12-10T21:37:16.000000000 , 2015-12-10T23:31:59.000000000--2015-12-10T23:47:56.000000000 , 2015-12-10T23:50:02.000000000--2015-12-11T00:04:00.000000000 , 2015-12-11T03:07:54.000000000--2015-12-11T03:27:05.000000000 , 2015-12-11T03:30:00.000000000--2015-12-11T03:47:58.000000000 , 2015-12-11T04:14:10.000000000--2015-12-11T04:16:59.000000000 , 2015-12-11T06:08:53.000000000--2015-12-11T06:15:08.000000000 , 2015-12-11T07:04:53.000000000--2015-12-11T07:14:05.000000000 , 2015-12-11T08:27:10.000000000--2015-12-11T08:37:56.000000000 , 2015-12-11T10:21:53.000000000--2015-12-11T10:25:11.000000000 , 2015-12-11T11:37:52.000000000--2015-12-11T11:38:59.000000000 , 2015-12-11T12:32:07.000000000--2015-12-11T12:33:58.000000000 , 2015-12-11T13:02:14.000000000--2015-12-11T13:13:05.000000000 , 2015-12-11T15:18:50.000000000--2015-12-11T15:53:59.000000000 , 2015-12-11T16:04:59.000000000--2015-12-11T16:12:04.000000000 , 2015-12-11T17:17:09.000000000--2015-12-11T17:19:04.000000000 , 2015-12-11T18:15:08.000000000--2015-12-11T18:24:15.000000000 , 2015-12-11T18:44:53.000000000--2015-12-11T18:51:08.000000000 , 2015-12-11T19:34:49.000000000--2015-12-11T19:46:09.000000000 , 2015-12-11T20:25:59.000000000--2015-12-11T20:33:57.000000000 , 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The number of meterID which has decreased: 4998

Occurring periods: 2015-10-20T07:30:18.000000000--2015-10-20T07:38:11.000000000

The number of meterID which has decreased: 5129

Occurring periods: 2015-10-17T18:36:59.000000000--2015-10-17T18:39:09.000000000 , 2015-10-17T22:39:55.000000000--2015-10-17T22:40:20.000000000 , 2015-10-20T12:32:32.000000000--2015-10-20T13:02:24.000000000 , 2015-12-07T16:34:10.000000000--2015-12-07T17:10:13.000000000 , 2015-12-07T18:31:11.000000000--2015-12-07T18:39:35.000000000 , 2015-12-07T19:24:03.000000000--2015-12-07T19:26:21.000000000 , 2015-12-07T20:25:08.000000000--2015-12-07T21:13:13.000000000 , 2015-12-08T00:08:55.000000000--2015-12-08T01:12:10.000000000 , 2015-12-08T02:29:09.000000000--2015-12-08T02:46:32.000000000 , 2015-12-08T03:10:00.000000000--2015-12-08T03:16:25.000000000 , 2015-12-08T06:39:12.000000000--2015-12-08T08:12:27.000000000 , 2015-12-08T08:21:00.000000000--2015-12-08T08:46:15.000000000 , 2015-12-08T10:18:14.000000000--2015-12-08T10:41:23.000000000 , 2015-12-08T10:43:11.000000000--2015-12-08T11:14:31.000000000 , 2015-12-08T12:22:00.000000000--2015-12-08T12:50:14.000000000 , 2015-12-08T12:58:03.000000000--2015-12-08T13:10:20.000000000 , 2015-12-08T14:15:21.000000000--2015-12-08T15:32:30.000000000 , 2015-12-08T17:46:11.000000000--2015-12-08T18:44:19.000000000 , 2015-12-08T20:43:00.000000000--2015-12-08T21:08:19.000000000 , 2015-12-09T00:35:06.000000000--2015-12-09T00:49:23.000000000 , 2015-12-09T01:08:02.000000000--2015-12-09T01:36:13.000000000 , 2015-12-09T01:58:09.000000000--2015-12-09T02:36:15.000000000 , 2015-12-09T05:51:07.000000000--2015-12-09T06:20:14.000000000 , 2015-12-09T07:22:14.000000000--2015-12-09T07:27:21.000000000 , 2015-12-09T08:29:03.000000000--2015-12-09T08:59:22.000000000 , 2015-12-09T09:17:01.000000000--2015-12-09T09:58:15.000000000 , 2015-12-09T10:49:15.000000000--2015-12-09T11:08:10.000000000 , 2015-12-09T11:33:13.000000000--2015-12-09T12:00:26.000000000 , 2015-12-09T13:22:01.000000000--2015-12-09T13:36:27.000000000 , 2015-12-09T13:40:58.000000000--2015-12-09T14:36:24.000000000 , 2015-12-09T17:00:02.000000000--2015-12-09T17:34:26.000000000 , 2015-12-09T20:05:15.000000000--2015-12-09T20:44:32.000000000 , 2015-12-10T00:52:15.000000000--2015-12-10T00:58:32.000000000 , 2015-12-10T02:06:01.000000000--2015-12-10T02:48:13.000000000 , 2015-12-10T04:58:11.000000000--2015-12-10T05:03:29.000000000 , 2015-12-10T05:23:09.000000000--2015-12-10T05:40:25.000000000 , 2015-12-10T07:18:10.000000000--2015-12-10T07:52:13.000000000 , 2015-12-10T08:10:19.000000000--2015-12-10T08:27:20.000000000 , 2015-12-10T08:41:15.000000000--2015-12-10T08:50:21.000000000 , 2015-12-10T09:47:03.000000000--2015-12-10T10:00:24.000000000 , 2015-12-10T10:48:02.000000000--2015-12-10T10:56:19.000000000 , 2015-12-10T12:35:19.000000000--2015-12-10T13:12:26.000000000 , 2015-12-10T13:36:15.000000000--2015-12-10T13:38:31.000000000 , 2015-12-10T14:50:00.000000000--2015-12-10T15:08:19.000000000 , 2015-12-10T15:50:10.000000000--2015-12-10T16:02:13.000000000 , 2015-12-10T16:12:15.000000000--2015-12-10T16:30:07.000000000 , 2015-12-10T16:53:16.000000000--2015-12-10T17:22:25.000000000 , 2015-12-10T17:28:13.000000000--2015-12-10T17:56:30.000000000 , 2015-12-10T23:24:02.000000000--2015-12-10T23:24:25.000000000 , 2015-12-11T00:41:18.000000000--2015-12-11T00:48:15.000000000 , 2015-12-11T01:35:16.000000000--2015-12-11T02:00:27.000000000 , 2015-12-11T04:05:10.000000000--2015-12-11T04:12:19.000000000 , 2015-12-11T05:04:22.000000000--2015-12-11T06:06:22.000000000 , 2015-12-11T07:19:02.000000000--2015-12-11T07:20:24.000000000 , 2015-12-11T10:17:12.000000000--2015-12-11T10:46:32.000000000 , 2015-12-11T11:04:04.000000000--2015-12-11T11:49:25.000000000 , 2015-12-11T13:57:15.000000000--2015-12-11T14:10:19.000000000 , 2015-12-11T16:54:12.000000000--2015-12-11T17:46:14.000000000 , 2015-12-11T17:53:26.000000000--2015-12-11T17:56:17.000000000 , 2015-12-11T18:23:16.000000000--2015-12-11T18:39:26.000000000 , 2015-12-11T19:02:17.000000000--2015-12-11T19:56:24.000000000 , 2015-12-11T20:58:10.000000000--2015-12-11T21:26:13.000000000 , 2015-12-11T22:10:22.000000000

000--2015-12-11T22:54:22.000000000 , 2015-12-12T00:15:06.000000000--2015-12-12T00:24:27.000000000 , 2015-12-12T01:22:12.000000000--2015-12-12T02:00:15.000000000 , 2015-12-12T02:47:17.000000000--2015-12-12T03:50:26.000000000 , 2015-12-12T04:30:03.000000000--2015-12-12T05:26:18.000000000 , 2015-12-12T05:55:16.000000000--2015-12-12T06:00:10.000000000 , 2015-12-12T07:19:14.000000000--2015-12-12T08:48:27.000000000 , 2015-12-12T09:54:13.000000000--2015-12-12T10:12:10.000000000 , 2015-12-12T11:27:16.000000000--2015-12-12T12:28:26.000000000 , 2015-12-12T15:21:16.000000000--2015-12-12T15:22:19.000000000 , 2015-12-12T16:31:10.000000000--2015-12-12T16:50:22.000000000 , 2015-12-12T19:58:14.000000000--2015-12-12T20:48:24.000000000 , 2015-12-13T00:48:05.000000000--2015-12-13T01:25:23.000000000 , 2015-12-13T01:52:05.000000000--2015-12-13T02:02:14.000000000

The number of meterID which has decreased: 5131

Occurring periods: 2016-03-31T00:23:48.000000000--2016-03-31T00:33:36.000000000

The number of meterID which has decreased: 5193

Occurring periods: 2015-11-01T01:38:35.000000000--2015-11-01T01:40:25.000000000 , 2015-11-01T01:49:43.000000000--2015-11-01T01:51:18.000000000 , 2015-11-01T07:36:31.000000000--2015-11-01T07:41:55.000000000 , 2015-11-01T07:47:21.000000000--2015-11-01T07:48:35.000000000

The number of meterID which has decreased: 5403

Occurring periods: 2015-10-17T10:18:16.000000000--2015-10-17T10:18:23.000000000 , 2015-10-17T11:57:19.000000000--2015-10-17T11:58:33.000000000 , 2015-10-17T13:22:08.000000000--2015-10-17T13:29:24.000000000 , 2015-10-17T13:37:07.000000000--2015-10-17T13:37:17.000000000 , 2015-10-17T13:38:07.000000000--2015-10-17T13:39:18.000000000 , 2015-10-17T14:31:17.000000000--2015-10-17T14:36:26.000000000 , 2015-10-17T14:38:23.000000000--2015-10-17T14:40:25.000000000 , 2015-10-17T17:28:05.000000000--2015-10-17T17:33:25.000000000 , 2015-10-17T20:40:04.000000000--2015-10-17T20:52:27.000000000 , 2015-10-17T20:55:12.000000000--2015-10-17T20:57:32.000000000 , 2015-10-17T21:56:06.000000000--2015-10-17T22:17:17.000000000 , 2015-10-17T23:30:21.000000000--2015-10-17T23:33:31.000000000 , 2015-10-17T23:40:16.000000000--2015-10-17T23:49:36.000000000 , 2015-10-18T01:06:10.000000000--2015-10-18T01:12:31.000000000 , 2015-10-20T15:52:31.000000000--2015-10-20T15:55:28.000000000 , 2015-10-20T17:13:15.000000000--2015-10-20T17:22:14.000000000 , 2015-10-20T23:05:33.000000000--2015-10-20T23:07:28.000000000 , 2015-11-01T01:29:55.000000000--2015-11-01T01:36:56.000000000 , 2015-12-07T17:30:08.000000000--2015-12-07T17:42:18.000000000 , 2015-12-07T18:39:06.000000000--2015-12-07T18:40:09.000000000 , 2015-12-07T19:30:17.000000000--2015-12-07T19:35:07.000000000 , 2015-12-07T19:43:21.000000000--2015-12-07T19:52:06.000000000 , 2015-12-07T21:54:04.000000000--2015-12-07T21:57:17.000000000 , 2015-12-07T22:32:00.000000000--2015-12-07T22:36:19.000000000 , 2015-12-07T23:10:09.000000000--2015-12-07T23:14:13.000000000 , 2015-12-07T23:26:14.000000000--2015-12-07T23:34:08.000000000 , 2015-12-07T23:47:19.000000000--2015-12-07T23:48:08.000000000 , 2015-12-08T01:25:09.000000000--2015-12-08T01:28:25.000000000 , 2015-12-08T02:31:58.000000000--2015-12-08T02:36:20.000000000 , 2015-12-08T03:29:09.000000000--2015-12-08T03:32:10.000000000 , 2015-12-08T03:38:14.000000000--2015-12-08T03:42:11.000000000 , 2015-12-08T03:57:18.000000000--2015-12-08T03:58:04.000000000 , 2015-12-08T05:07:12.000000000--2015-12-08T05:09:19.000000000 , 2015-12-08T05:19:14.000000000--2015-12-08T05:28:27.000000000 , 2015-12-08T05:44:03.000000000--2015-12-08T05:57:23.000000000 , 2015-12-08T06:06:08.000000000--2015-12-08T06:13:22.000000000 , 2015-12-08T07:30:13.000000000--2015-12-08T07:38:13.000000000 , 2015-12-08T07:56:13.000000000--2015-12-08T07:57:08.000000000 , 2015-12-08T08:05:16.000000000--2015-12-08T08:08:05.000000000 , 2015-12-08T08:15:23.000000000--2015-12-08T08:24:05.000000000 , 2015-12-08T08:29:23.000000000--2015-12-08T08:30:09.000000000 , 2015-12-08T08:45:16.000000000--2015-12-08T09:00:15.000000000 , 2015-12-08T10:54:59.000000000--2015-12-08T10:56:21.000000000 , 2015-12-08T11:50:11.000000000--2015-12-08T12:02:07.000000000 , 2015-12-08T12:12:11.000000000--2015-12-08T12:15:07.000000000 , 2015-12-08T12:42:22.000000000--2015-12-08T12:48:08.000000000 , 2015-12-08T13:04:09.000000000--2015-12-08T13:07:16.000000000 , 2015-12-08T13:20:11.000000000--2015-12-08T13:24:16.000000000 , 2015-12-08T13:35:12.000000000--2015-12-08T13:44:22.000000000 , 2015-12-08T14:44:03.000000000--2015-12-08T14:45:16.000000000 , 2015-12-08T17:21:17.000000000--2015-12-08T17:24:15.000000000 , 2015-12-08T20:00:10.000000000--2015-12-08T20:00:12.000000000 , 2015-12-08T20:57:19.000000000--2015-12-08T21:00:04.000000000 , 2015-12-08T21:06:22.000000000--2015-12-08T21:13:06.000000000 , 2015-12-08T22:24:10.000000000--2015-12-08T22:29:26.000000000 , 2015-12-09T01:21:25.000000000--2015-12-09T01:26:08.000000000 , 2015-12-09T02:01:15.000000000--2015-12-09T02:02:19.000000000 , 2015-12-09T02:36:10.000000000--2015-12-09T02:44:27.000000000 , 2015-12-09T03:31:02.000000000--2015-12-09T03:34:15.000000000 , 2015-12-09T03:39:59.000000000--2015-12-09T0

3:45:19.000000000 , 2015-12-09T04:51:15.000000000--2015-12-09T05:00:06.000000000 , 2015-12-09T07:51:00.000000000--2015-12-09T07:52:14.000000000 , 2015-12-09T08:51:09.000000000--2015-12-09T08:58:08.000000000 , 2015-12-09T09:36:18.000000000--2015-12-09T09:42:07.000000000 , 2015-12-09T11:05:07.000000000--2015-12-09T11:08:26.000000000 , 2015-12-09T11:36:07.000000000--2015-12-09T11:39:17.000000000 , 2015-12-09T11:51:05.000000000--2015-12-09T11:54:20.000000000 , 2015-12-09T12:05:58.000000000--2015-12-09T12:09:19.000000000 , 2015-12-09T12:55:10.000000000--2015-12-09T13:32:03.000000000 , 2015-12-09T13:46:18.000000000--2015-12-09T14:04:10.000000000 , 2015-12-09T15:39:08.000000000--2015-12-09T15:45:19.000000000 , 2015-12-09T17:45:18.000000000--2015-12-09T17:52:07.000000000 , 2015-12-09T18:11:23.000000000--2015-12-09T18:19:12.000000000 , 2015-12-09T18:19:17.000000000--2015-12-09T18:25:14.000000000 , 2015-12-09T19:01:11.000000000--2015-12-09T19:04:16.000000000 , 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2015-12-10T12:20:03.000000000--2015-12-10T12:26:24.000000000 , 2015-12-10T12:49:07.000000000--2015-12-10T12:54:14.000000000 , 2015-12-10T13:02:03.000000000--2015-12-10T13:20:18.000000000 , 2015-12-10T15:14:18.000000000--2015-12-10T15:26:12.000000000 , 2015-12-10T15:34:15.000000000--2015-12-10T15:41:12.000000000 , 2015-12-10T17:30:59.000000000--2015-12-10T17:46:16.000000000 , 2015-12-10T19:02:21.000000000--2015-12-10T19:03:05.000000000 , 2015-12-10T19:29:17.000000000--2015-12-10T19:30:10.000000000 , 2015-12-10T19:38:13.000000000--2015-12-10T19:41:12.000000000 , 2015-12-10T20:15:12.000000000--2015-12-10T20:27:23.000000000 , 2015-12-10T21:20:03.000000000--2015-12-10T21:35:13.000000000 , 2015-12-10T22:34:09.000000000--2015-12-10T22:42:09.000000000 , 2015-12-10T23:14:21.000000000--2015-12-10T23:17:03.000000000 , 2015-12-11T00:13:15.000000000--2015-12-11T00:19:18.000000000 , 2015-12-11T00:58:59.000000000--2015-12-11T01:00:26.000000000 , 2015-12-11T01:25:07.000000000--2015-12-11T01:26:16.000000000 , 2015-12-11T02:13:59.000000000--2015-12-11T02:14:12.000000000 , 2015-12-11T02:26:06.000000000--2015-12-11T02:28:05.000000000 , 2015-12-11T02:35:09.000000000--2015-12-11T02:48:09.000000000 , 2015-12-11T02:49:09.000000000--2015-12-11T03:04:05.000000000 , 2015-12-11T04:15:12.000000000--2015-12-11T04:16:13.000000000 , 2015-12-11T05:38:06.000000000--2015-12-11T05:38:15.000000000 , 2015-12-11T05:44:03.000000000--2015-12-11T05:52:14.000000000 , 2015-12-11T10:14:00.000000000--2015-12-11T10:18:14.000000000 , 2015-12-11T11:25:11.000000000--2015-12-11T11:27:03.000000000 , 2015-12-11T11:58:18.000000000--2015-12-11T12:16:08.000000000 , 2015-12-11T12:48:12.000000000--2015-12-11T12:54:16.000000000 , 2015-12-11T14:52:02.000000000--2015-12-11T15:02:02.000000000 , 2015-12-11T15:10:09.000000000--2015-12-11T15:20:09.000000000 , 2015-12-11T15:39:15.000000000--2015-12-11T15:57:59.000000000 , 2015-12-11T16:22:23.000000000--2015-12-11T16:36:11.000000000 , 2015-12-11T18:12:07.000000000--2015-12-11T18:32:15.000000000 , 2015-12-11T18:41:58.000000000--2015-12-11T19:08:08.000000000 , 2015-12-11T19:32:09.000000000--2015-12-11T19:36:08.000000000 , 2015-12-11T20:43:17.000000000--2015-12-11T21:15:12.000000000 , 2015-12-11T21:50:08.000000000--2015-12-11T21:52:20.000000000 , 2015-12-11T22:17:07.000000000--2015-12-11T22:17:12.000000000 , 2015-12-11T23:59:11.000000000--2015-12-12T00:13:02.000000000 , 2015-12-12T02:00:10.000000000--2015-12-12T02:05:21.000000000 , 2015-12-12T04:02:10.000000000--2015-12-12T04:11:02.000000000 , 2015-12-12T04:14:13.000000000--2015-12-12T04:19:05.000000000 , 2015-12-12T05:09:15.000000000--2015-12-12T05:14:10.000000000 , 2015-12-12T06:18:06.000000000--2015-12-12T06:34:15.000000000 , 2015-12-12T07:22:01.000000000--2015-12-12T07:26:17.000000000 , 2015-12-12T08:04:09.000000000--2015-12-12T08:18:07.000000000 , 2015-12-12T08:59:16.000000000--2015-12-12T08:59:59.000000000 , 2015-12-12T09:09:24.000000000--2015-12-12T09:15:04.000000000 , 2015-12-12T09:27:11.000000000--2015-12-12T09:54:14.000000000 , 2015-12-12T11:36:01.000000000--2015-12-12T11:42:16.000000000 , 2015-12-12T12:22:08.000000000--2015-12-12T12:28:06.000000000 , 2015-12-12T13:09:18.000000000--2015-12-12T13:19:03.000000000 , 2015-12-12T13:54:12.000000000--2015-12-12T14:07:15.000000000 , 2015-12-12T14:33:11.000000000--2015-12-12T14:46:23.000000000 , 2015-12-12T15:39:00.000000000--2015-12-12T16:02:10.000000000 , 2015-12-12T16:04:02.000000000--2015-12-12T16:07:07.000000000 , 2015-12-12T17:57:16.000000000--2015-12-12T17:58:09.000000000 , 2015-12-12T18:34:14.000000000--2015-12-12T18:34:16.000000000 , 2015-12-12T19:09:05.000000000--2015-12-12T19:15:14.000000000 , 2015-12-12T20:21:03.

000000000--2015-12-12T20:24:00.000000000 , 2015-12-12T21:28:20.000000000--2015-12-12T21:33:59.000000000 , 2015-12-12T22:05:11.000000000--2015-12-12T22:08:12.000000000 , 2015-12-12T23:39:06.000000000--2015-12-12T23:45:10.000000000 , 2015-12-13T00:17:02.000000000--2015-12-13T00:18:15.000000000 , 2015-12-13T00:35:01.000000000--2015-12-13T00:38:00.000000000 , 2016-03-30T20:30:09.000000000--2016-03-30T20:41:55.000000000 , 2016-03-30T22:01:56.000000000--2016-03-30T22:02:41.000000000

The number of meterID which has decreased: 5810

Occurring periods: 2015-10-31T00:00:00.000000000--2015-10-31T00:04:45.000000000 , 2015-11-01T01:02:31.000000000--2015-11-01T01:09:19.000000000 , 2015-11-01T01:24:09.000000000--2015-11-01T01:30:49.000000000 , 2015-11-01T01:34:33.000000000--2015-11-01T01:39:59.000000000 , 2015-11-01T01:49:03.000000000--2015-11-01T01:50:11.000000000 , 2015-11-28T11:19:51.000000000--2015-11-28T11:19:59.000000000 , 2015-11-28T11:22:19.000000000--2015-11-28T11:22:47.000000000 , 2016-02-22T17:19:40.000000000--2016-02-22T17:25:47.000000000 , 2016-02-22T17:31:45.000000000--2016-02-22T17:38:40.000000000 , 2016-02-22T17:41:41.000000000--2016-02-22T17:42:13.000000000

The number of meterID which has decreased: 5814

Occurring periods: 2015-11-01T01:53:17.000000000--2015-11-01T01:57:39.000000000

The number of meterID which has decreased: 5892

Occurring periods: 2015-11-01T01:05:44.000000000--2015-11-01T01:22:43.000000000

The number of meterID which has decreased: 6836

Occurring periods: 2015-10-17T12:01:39.000000000--2015-10-17T12:36:50.000000000 , 2015-12-07T19:22:40.000000000--2015-12-07T20:07:34.000000000 , 2015-12-07T20:51:49.000000000--2015-12-07T22:15:50.000000000 , 2015-12-07T22:24:41.000000000--2015-12-07T23:06:47.000000000 , 2015-12-07T23:31:37.000000000--2015-12-07T23:43:40.000000000 , 2015-12-08T02:42:40.000000000--2015-12-08T04:29:33.000000000 , 2015-12-08T07:18:33.000000000--2015-12-08T07:23:44.000000000 , 2015-12-08T10:05:44.000000000--2015-12-08T11:18:45.000000000 , 2015-12-08T11:21:38.000000000--2015-12-08T11:26:46.000000000 , 2015-12-08T12:11:41.000000000--2015-12-08T12:43:33.000000000 , 2015-12-08T12:54:44.000000000--2015-12-08T13:05:32.000000000 , 2015-12-08T14:25:47.000000000--2015-12-08T14:35:55.000000000 , 2015-12-08T16:01:35.000000000--2015-12-08T16:41:38.000000000 , 2015-12-08T17:59:44.000000000--2015-12-08T18:13:41.000000000 , 2015-12-08T18:34:45.000000000--2015-12-08T19:15:49.000000000 , 2015-12-08T20:56:43.000000000--2015-12-08T22:09:40.000000000 , 2015-12-08T23:23:36.000000000--2015-12-08T23:29:47.000000000 , 2015-12-09T09:04:35.000000000--2015-12-09T09:35:37.000000000 , 2015-12-09T12:40:34.000000000--2015-12-09T13:05:42.000000000 , 2015-12-09T20:58:38.000000000--2015-12-09T21:10:40.000000000 , 2015-12-09T21:55:41.000000000--2015-12-09T22:03:36.000000000 , 2015-12-09T22:48:51.000000000--2015-12-09T22:55:28.000000000 , 2015-12-10T03:13:55.000000000--2015-12-10T03:16:34.000000000 , 2015-12-10T06:08:38.000000000--2015-12-10T06:20:39.000000000 , 2015-12-10T07:11:51.000000000--2015-12-10T07:33:34.000000000 , 2015-12-10T08:49:37.000000000--2015-12-10T09:17:46.000000000 , 2015-12-10T13:34:39.000000000--2015-12-10T14:22:38.000000000 , 2015-12-10T16:12:45.000000000--2015-12-10T16:47:43.000000000 , 2015-12-10T17:38:39.000000000--2015-12-10T18:35:38.000000000 , 2015-12-10T21:58:39.000000000--2015-12-10T22:01:40.000000000 , 2015-12-11T00:28:46.000000000--2015-12-11T01:17:47.000000000 , 2015-12-11T01:44:35.000000000--2015-12-11T02:17:40.000000000 , 2015-12-11T03:50:45.000000000--2015-12-11T03:56:28.000000000 , 2015-12-11T04:16:50.000000000--2015-12-11T04:40:37.000000000 , 2015-12-11T05:02:43.000000000--2015-12-11T05:09:40.000000000 , 2015-12-11T05:37:46.000000000--2015-12-11T06:16:43.000000000 , 2015-12-11T06:19:40.000000000--2015-12-11T06:53:43.000000000 , 2015-12-11T08:28:50.000000000--2015-12-11T09:27:41.000000000 , 2015-12-11T09:35:45.000000000--2015-12-11T09:36:44.000000000 , 2015-12-11T13:00:48.000000000--2015-12-11T14:14:50.000000000 , 2015-12-11T15:14:30.000000000--2015-12-11T15:56:37.000000000 , 2015-12-11T16:16:42.000000000--2015-12-11T16:46:31.000000000 , 2015-12-11T18:17:43.000000000--2015-12-11T18:33:47.000000000 , 2015-12-11T19:26:30.000000000--2015-12-11T19:54:29.000000000 , 2015-12-11T23:42:33.000000000--2015-12-12T00:19:35.000000000 , 2015-12-12T05:32:51.000000000--2015-12-12T05:51:35.000000000 , 2015-12-12T07:07:33.000000000--2015-12-12T07:30:42.000000000 , 2015-12-12T15:25:36.000000000--2015-12-12T15:36:44.000000000 , 2015-12-12T15:53:37.000000000--2015-12-12T16:16:37.000000000 , 2015-12-12T19:22:48.000000000--2015-12-12T19:26:45.000000000 , 2015-12-12T22:39:47.000000000--2015-12-12T23:56:47.000000000

The number of meterID which has decreased: 7017

Occurring periods: 2015-10-20T11:54:31.000000000--2015-10-20T12:05:00.000000000

The number of meterID which has decreased: 7030

Occurring periods: 2015-10-17T10:19:24.000000000--2015-10-17T10:25:30.000000000 , 2015-10-17T11:48:28.000000000--2015-10-17T11:56:44.000000000 , 2015-10-17T16:04:26.000000000--2015-10-17T16:11:46.000000000 , 2015-10-17T16:17:26.000000000--2015-10-17T16:21:48.000000000 , 2015-10-17T17:51:13.000000000--2015-10-17T18:17:30.000000000 , 2015-10-17T21:00:22.000000000--2015-10-17T21:03:40.000000000 , 2015-10-18T01:30:18.000000000--2015-10-18T01:30:38.000000000 , 2015-10-20T12:35:43.000000000--2015-10-20T12:40:39.000000000 , 2015-10-20T17:27:33.000000000--2015-10-20T17:29:32.000000000 , 2015-11-01T01:10:20.000000000--2015-11-01T01:16:29.000000000 , 2015-11-01T01:56:19.000000000--2015-11-01T01:58:27.000000000 , 2015-12-07T17:49:11.000000000--2015-12-07T17:54:21.000000000 , 2015-12-07T20:21:26.000000000--2015-12-07T20:30:09.000000000 , 2015-12-07T21:31:24.000000000--2015-12-07T21:35:26.000000000 , 2015-12-07T22:55:10.000000000--2015-12-07T22:59:21.000000000 , 2015-12-08T00:21:29.000000000--2015-12-08T00:26:08.000000000 , 2015-12-08T01:09:25.000000000--2015-12-08T01:26:21.000000000 , 2015-12-08T01:39:23.000000000--2015-12-08T01:53:26.000000000 , 2015-12-08T03:03:09.000000000--2015-12-08T03:07:20.000000000 , 2015-12-08T08:25:25.000000000--2015-12-08T08:27:10.000000000 , 2015-12-08T09:23:24.000000000--2015-12-08T10:17:26.000000000 , 2015-12-08T11:27:09.000000000--2015-12-08T11:31:20.000000000 , 2015-12-08T12:20:19.000000000--2015-12-08T12:44:07.000000000 , 2015-12-08T12:55:28.000000000--2015-12-08T13:37:15.000000000 , 2015-12-08T18:38:26.000000000--2015-12-08T19:03:21.000000000 , 2015-12-08T22:15:21.000000000--2015-12-08T22:20:17.000000000 , 2015-12-08T23:05:15.000000000--2015-12-08T23:07:29.000000000 , 2015-12-09T00:54:19.000000000--2015-12-09T00:58:13.000000000 , 2015-12-09T01:25:24.000000000--2015-12-09T01:29:03.000000000 , 2015-12-09T02:31:22.000000000--2015-12-09T02:34:17.000000000 , 2015-12-09T04:53:18.000000000--2015-12-09T04:55:12.000000000 , 2015-12-09T05:33:21.000000000--2015-12-09T05:50:08.000000000 , 2015-12-09T07:12:26.000000000--2015-12-09T07:14:24.000000000 , 2015-12-09T07:40:12.000000000--2015-12-09T07:57:19.000000000 , 2015-12-09T10:41:25.000000000--2015-12-09T11:13:21.000000000 , 2015-12-09T12:27:15.000000000--2015-12-09T12:35:15.000000000 , 2015-12-09T15:05:21.000000000--2015-12-09T15:25:21.000000000 , 2015-12-09T16:38:15.000000000--2015-12-09T17:27:07.000000000 , 2015-12-09T19:50:27.000000000--2015-12-09T20:04:28.000000000 , 2015-12-09T21:18:11.000000000--2015-12-09T21:36:07.000000000 , 2015-12-09T22:35:31.000000000--2015-12-09T22:45:01.000000000 , 2015-12-09T23:43:22.000000000--2015-12-10T00:01:25.000000000 , 2015-12-10T03:51:26.000000000--2015-12-10T03:55:18.000000000 , 2015-12-10T04:41:13.000000000--2015-12-10T04:58:17.000000000 , 2015-12-10T05:37:12.000000000--2015-12-10T06:04:07.000000000 , 2015-12-10T12:55:12.000000000--2015-12-10T13:03:21.000000000 , 2015-12-10T13:32:11.000000000--2015-12-10T13:34:19.000000000 , 2015-12-10T14:10:07.000000000--2015-12-10T14:17:08.000000000 , 2015-12-10T16:17:22.000000000--2015-12-10T16:24:19.000000000 , 2015-12-10T17:20:18.000000000--2015-12-10T17:26:15.000000000 , 2015-12-10T18:47:19.000000000--2015-12-10T19:03:08.000000000 , 2015-12-10T19:41:31.000000000--2015-12-10T20:04:12.000000000 , 2015-12-10T20:18:26.000000000--2015-12-10T20:25:12.000000000 , 2015-12-10T20:44:22.000000000--2015-12-10T20:49:20.000000000 , 2015-12-10T21:31:17.000000000--2015-12-10T21:39:17.000000000 , 2015-12-10T22:07:12.000000000--2015-12-10T22:17:19.000000000 , 2015-12-10T23:41:28.000000000--2015-12-10T23:45:05.000000000 , 2015-12-11T00:15:28.000000000--2015-12-11T00:20:14.000000000 , 2015-12-11T00:34:25.000000000--2015-12-11T00:44:16.000000000 , 2015-12-11T01:41:14.000000000--2015-12-11T01:44:17.000000000 , 2015-12-11T01:45:19.000000000--2015-12-11T01:46:19.000000000 , 2015-12-11T03:19:21.000000000--2015-12-11T03:39:08.000000000 , 2015-12-11T05:56:18.000000000--2015-12-11T06:01:13.000000000 , 2015-12-11T06:25:16.000000000--2015-12-11T06:46:20.000000000 , 2015-12-11T09:36:27.000000000--2015-12-11T09:49:25.000000000 , 2015-12-11T09:55:12.000000000--2015-12-11T10:07:18.000000000 , 2015-12-11T12:22:30.000000000--2015-12-11T12:23:07.000000000 , 2015-12-11T12:36:30.000000000--2015-12-11T12:44:05.000000000 , 2015-12-11T13:37:23.000000000--2015-12-11T13:41:20.000000000 , 2015-12-11T14:38:18.000000000--2015-12-11T14:49:19.000000000 , 2015-12-11T16:47:30.000000000--2015-12-11T16:48:04.000000000 , 2015-12-11T20:36:23.000000000--2015-12-11T20:37:03.000000000 , 2015-12-12T03:11:19.000000000--2015-12-12T03:27:17.000000000 , 2015-12-12T06:05:22.000000000--2015-12-12T06:06:14.000000000 , 2015-12-12T06:09:24.000000000--2015-12-12T06:13:18.000000000 , 2015-12-12T06:59:13.000000000--2015-12-12T06:59:22.000000000 , 2015-12-12T07:24:18.000000000--2015-12-12T08:07:16.000000000 , 2015-12-12T08:29:20.000000000--2015-12-12T08:33:13.000000000 , 2015-12-12T09:15:28.000000000--2015-12-12T09:23:06.000000000 , 2015-12-12T10:45:27.000000000--2015-12-12T10:47:24.000000000 , 2015-12-12T12:17:14.000000000--2015-12-12T12:29:06.000000000 , 2015-12-12T13:39:31.000000000--2015-12-12T13:47:02.000000000 , 2015-12-12T17:07:22.000000000--2015-12-12T17:37:02.000000000 , 2015-12-12T20:23:14.000000000--2015-12-12T20:38:18.000000000 , 2015-12-12T20:47:10.000000000--2015-12-12T20:47:11.000000000 , 2015-12-12T21:16:25.000000000--2015-12-

-12T21:45:03.000000000 , 2015-12-12T22:10:30.000000000--2015-12-12T22:13:06.000000000
 , 2015-12-12T23:11:23.000000000--2015-12-12T23:23:24.000000000 , 2015-12-13T00:07:18.
000000000--2015-12-13T00:21:16.000000000 , 2015-12-13T01:11:16.000000000--2015-12-13T0
1:20:11.000000000

The number of meterID which has decreased: 7117

Occurring periods: 2015-10-17T00:00:00.000000000--2015-10-17T00:07:17.000000000 , 2015
-10-17T09:20:45.000000000--2015-10-17T09:37:09.000000000 , 2015-10-17T09:58:41.00000000
00--2015-10-17T09:58:54.000000000 , 2015-10-17T13:58:40.000000000--2015-10-17T14:08:5
4.000000000 , 2015-10-17T23:07:43.000000000--2015-10-17T23:25:52.000000000 , 2015-10-2
0T12:21:11.000000000--2015-10-20T12:26:58.000000000 , 2015-10-20T12:49:03.000000000--2
015-10-20T13:44:52.000000000 , 2015-11-01T01:02:50.000000000--2015-11-01T01:04:53.0000
00000 , 2015-11-01T01:05:47.000000000--2015-11-01T01:09:51.000000000 , 2015-11-01T01:1
4:47.000000000--2015-11-01T01:14:55.000000000 , 2015-11-01T01:25:49.000000000--2015-11
-01T01:25:51.000000000 , 2015-12-07T17:12:56.000000000--2015-12-07T17:15:09.000000000
 , 2015-12-07T18:28:51.000000000--2015-12-07T18:32:12.000000000 , 2015-12-07T20:57:05.
000000000--2015-12-07T21:04:00.000000000 , 2015-12-08T01:47:01.000000000--2015-12-08T0
1:52:09.000000000 , 2015-12-08T03:01:54.000000000--2015-12-08T03:20:11.000000000 , 201
5-12-08T03:45:49.000000000--2015-12-08T03:53:12.000000000 , 2015-12-08T04:45:00.000000
000--2015-12-08T05:34:01.000000000 , 2015-12-08T05:48:56.000000000--2015-12-08T06:02:0
7.000000000 , 2015-12-08T07:15:53.000000000--2015-12-08T07:52:14.000000000 , 2015-12-0
8T07:56:48.000000000--2015-12-08T08:00:14.000000000 , 2015-12-08T08:22:53.000000000--2
015-12-08T08:37:06.000000000 , 2015-12-08T08:53:57.000000000--2015-12-08T09:26:01.0000
00000 , 2015-12-08T10:40:01.000000000--2015-12-08T10:48:19.000000000 , 2015-12-08T11:2
7:53.000000000--2015-12-08T11:31:15.000000000 , 2015-12-08T13:50:09.000000000--2015-12
-08T13:59:02.000000000 , 2015-12-08T15:34:54.000000000--2015-12-08T15:36:11.000000000
 , 2015-12-08T15:49:53.000000000--2015-12-08T15:54:09.000000000 , 2015-12-08T17:03:57.
000000000--2015-12-08T17:14:05.000000000 , 2015-12-08T19:54:54.000000000--2015-12-08T1
9:55:14.000000000 , 2015-12-08T20:04:50.000000000--2015-12-08T20:17:10.000000000 , 201
5-12-08T21:18:56.000000000--2015-12-08T21:24:04.000000000 , 2015-12-08T22:55:59.000000
000--2015-12-08T23:01:13.000000000 , 2015-12-08T23:28:00.000000000--2015-12-08T23:30:1
8.000000000 , 2015-12-09T01:15:54.000000000--2015-12-09T01:24:05.000000000 , 2015-12-0
9T02:54:03.000000000--2015-12-09T03:17:10.000000000 , 2015-12-09T03:41:58.000000000--2
015-12-09T03:50:18.000000000 , 2015-12-09T04:11:55.000000000--2015-12-09T04:16:11.0000
00000 , 2015-12-09T04:24:53.000000000--2015-12-09T04:35:12.000000000 , 2015-12-09T07:0
5:01.000000000--2015-12-09T07:10:05.000000000 , 2015-12-09T07:12:58.000000000--2015-12
-09T07:18:08.000000000 , 2015-12-09T07:48:01.000000000--2015-12-09T08:18:12.000000000
 , 2015-12-09T08:33:54.000000000--2015-12-09T09:00:07.000000000 , 2015-12-09T10:49:07.
000000000--2015-12-09T11:50:13.000000000 , 2015-12-09T12:27:49.000000000--2015-12-09T1
2:47:10.000000000 , 2015-12-09T14:01:57.000000000--2015-12-09T14:06:04.000000000 , 201
5-12-09T15:58:56.000000000--2015-12-09T16:00:09.000000000 , 2015-12-09T16:20:56.000000
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8.000000000 , 2015-12-09T17:29:46.000000000--2015-12-09T18:00:00.000000000 , 2015-12-0
9T18:14:59.000000000--2015-12-09T18:19:02.000000000 , 2015-12-09T18:28:56.000000000--2
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0:11:08.000000000 , 2015-12-10T02:32:56.000000000--2015-12-10T02:39:04.000000000 , 201
5-12-10T04:05:01.000000000--2015-12-10T04:25:12.000000000 , 2015-12-10T04:47:02.000000
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0T08:21:59.000000000--2015-12-10T08:28:07.000000000 , 2015-12-10T09:38:54.000000000--2
015-12-10T09:48:10.000000000 , 2015-12-10T12:12:02.000000000--2015-12-10T12:17:04.0000
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5-12-10T23:25:54.000000000--2015-12-10T23:26:59.000000000 , 2015-12-11T00:21:05.000000
000--2015-12-11T00:23:58.000000000 , 2015-12-11T01:29:57.000000000--2015-12-11T01:42:1
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The number of meterID which has decreased: 7739

Occurring periods: 2015-11-01T01:30:25.000000000--2015-11-01T01:53:25.000000000

The number of meterID which has decreased: 7794

Occurring periods: 2015-11-01T07:40:58.000000000--2015-11-01T08:01:58.000000000

The number of meterID which has decreased: 7989

Occurring periods: 2015-11-01T01:40:20.000000000--2015-11-01T01:45:28.000000000 , 2015-12-13T00:00:00.000000000--2015-12-13T00:01:18.000000000

The number of meterID which has decreased: 8156

Occurring periods: 2015-10-17T12:56:09.000000000--2015-10-17T13:06:23.000000000 , 2015-10-17T13:15:08.000000000--2015-10-17T13:20:22.000000000 , 2015-10-17T16:32:09.000000000--2015-10-17T16:43:22.000000000 , 2015-10-17T20:29:09.000000000--2015-10-17T20:31:21.000000000 , 2015-10-17T21:03:08.000000000--2015-10-17T21:04:22.000000000 , 2015-10-18T01:16:08.000000000--2015-10-18T01:17:21.000000000 , 2015-10-20T06:59:22.000000000--2015-10-20T07:09:19.000000000 , 2015-10-20T07:41:22.000000000--2015-10-20T07:47:19.000000000 , 2015-10-20T10:38:22.000000000--2015-10-20T10:52:20.000000000 , 2015-10-20T12:58:36.000000000--2015-10-20T13:00:19.000000000 , 2015-10-20T21:21:21.000000000--2015-10-20T21:28:19.000000000 , 2015-10-20T21:30:21.000000000--2015-10-20T21:33:19.000000000 , 2015-12-07T16:37:39.000000000--2015-12-07T16:47:45.000000000 , 2015-12-07T17:25:39.000000000--2015-12-07T17:28:45.000000000 , 2015-12-07T17:45:40.000000000--2015-12-07T17:52:45.000000000 , 2015-12-07T18:09:40.000000000--2015-12-07T18:15:44.000000000 , 2015-12-07T18:45:39.000000000--2015-12-07T18:55:45.000000000 , 2015-12-07T19:09:39.000000000--2015-12-07T19:11:45.000000000 , 2015-12-07T19:26:40.000000000--2015-12-07T19:30:45.000000000 , 2015-12-07T19:55:39.000000000--2015-12-07T19:56:45.000000000 , 2015-12-07T21:12:40.000000000--2015-12-07T21:15:45.000000000 , 2015-12-07T22:04:39.000000000--2015-12-07T22:07:45.000000000 , 2015-12-07T22:17:40.000000000--2015-12-07T22:29:45.000000000 , 2015-12-07T22:44:39.000000000--2015-12-07T22:46:45.000000000 , 2015-12-07T23:26:39.000000000--2015-12-07T23:31:45.000000000 , 2015-12-08T00:37:39.000000000--2015-12-08T00:45:44.000000000 , 2015-12-08T02:13:39.000000000--2015-12-08T02:15:44.000000000 , 2015-12-08T04:00:39.000000000--2015-12-08T04:11:45.000000000 , 2015-12-08T05:25:40.

000000000--2015-12-08T05:32:45.000000000 , 2015-12-08T07:12:40.000000000--2015-12-08T07:20:44.000000000 , 2015-12-08T07:34:39.000000000--2015-12-08T07:36:44.000000000 , 2015-12-08T07:52:39.000000000--2015-12-08T08:05:45.000000000 , 2015-12-08T08:21:39.000000000--2015-12-08T08:21:45.000000000 , 2015-12-08T09:44:39.000000000--2015-12-08T09:45:45.000000000 , 2015-12-08T11:39:39.000000000--2015-12-08T11:40:45.000000000 , 2015-12-08T15:02:39.000000000--2015-12-08T15:05:44.000000000 , 2015-12-08T15:19:40.000000000--2015-12-08T15:21:45.000000000 , 2015-12-08T17:35:40.000000000--2015-12-08T17:38:44.000000000 , 2015-12-08T19:51:39.000000000--2015-12-08T19:55:44.000000000 , 2015-12-08T21:06:39.000000000--2015-12-08T21:11:45.000000000 , 2015-12-08T21:21:40.000000000--2015-12-08T21:23:45.000000000 , 2015-12-08T21:31:40.000000000--2015-12-08T21:34:44.000000000 , 2015-12-08T23:20:39.000000000--2015-12-08T23:21:44.000000000 , 2015-12-09T00:19:40.000000000--2015-12-09T00:19:44.000000000 , 2015-12-09T01:08:39.000000000--2015-12-09T01:21:44.000000000 , 2015-12-09T01:58:39.000000000--2015-12-09T02:07:44.000000000 , 2015-12-09T03:22:40.000000000--2015-12-09T03:22:45.000000000 , 2015-12-09T03:28:39.000000000--2015-12-09T03:31:44.000000000 , 2015-12-09T04:50:40.000000000--2015-12-09T04:50:45.000000000 , 2015-12-09T05:03:39.000000000--2015-12-09T05:05:44.000000000 , 2015-12-09T05:21:40.000000000--2015-12-09T05:24:44.000000000 , 2015-12-09T07:23:39.000000000--2015-12-09T07:35:45.000000000 , 2015-12-09T07:48:39.000000000--2015-12-09T07:53:45.000000000 , 2015-12-09T08:43:39.000000000--2015-12-09T09:14:44.000000000 , 2015-12-09T09:24:40.000000000--2015-12-09T09:26:45.000000000 , 2015-12-09T09:36:39.000000000--2015-12-09T09:41:44.000000000 , 2015-12-09T10:04:39.000000000--2015-12-09T10:04:44.000000000 , 2015-12-09T12:06:40.000000000--2015-12-09T12:16:43.000000000 , 2015-12-09T12:28:40.000000000--2015-12-09T12:34:44.000000000 , 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2015-12-09T22:08:40.000000000--2015-12-09T22:11:44.000000000 , 2015-12-09T22:42:39.000000000--2015-12-09T22:43:43.000000000 , 2015-12-09T22:50:39.000000000--2015-12-09T23:03:43.000000000 , 2015-12-09T23:38:40.000000000--2015-12-09T23:56:43.000000000 , 2015-12-10T00:43:40.000000000--2015-12-10T00:50:43.000000000 , 2015-12-10T01:20:40.000000000--2015-12-10T01:23:43.000000000 , 2015-12-10T01:54:40.000000000--2015-12-10T01:55:43.000000000 , 2015-12-10T01:57:39.000000000--2015-12-10T02:06:44.000000000 , 2015-12-10T02:20:40.000000000--2015-12-10T02:26:44.000000000 , 2015-12-10T06:54:40.000000000--2015-12-10T06:55:43.000000000 , 2015-12-10T07:05:39.000000000--2015-12-10T07:09:44.000000000 , 2015-12-10T08:13:40.000000000--2015-12-10T08:15:44.000000000 , 2015-12-10T08:26:40.000000000--2015-12-10T08:38:44.000000000 , 2015-12-10T08:41:39.000000000--2015-12-10T08:56:43.000000000 , 2015-12-10T09:51:39.000000000--2015-12-10T10:08:43.000000000 , 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, 2015-12-11T19:19:40.000000000--2015-12-11T19:45:42.000000000 , 2015-12-11T19:51:40.000000000--2015-12-11T19:53:42.000000000 , 2015-12-11T20:02:40.000000000--2015-12-11T20:05:41.000000000 , 2015-12-11T20:26:39.000000000--2015-12-11T20:33:41.000000000 , 2015-12-12T00:40:40.000000000--2015-12-12T01:03:42.000000000 , 2015-12-12T02:05:39.000000000--2015-12-12T02:15:42.000000000 , 2015-12-12T03:41:39.000000000--2015-12-12T03:43:41.000000000 , 2015-12-12T07:27:40.000000000--2015-12-12T07:37:42.000000000 , 2015-12-12T09:26:40.000000000--2015-12-12T09:40:41.000000000 , 2015-12-12T10:21:40.000000000--2015-12-12T10:21:41.000000000 , 2015-12-12T10:52:39.000000000--2015-12-12T10:53:41.000000000 , 2015-12-12T11:29:40.000000000--2015-12-12T11:52:41.000000000 , 2015-12-12T13:12:40.000000000--2015-12-12T13:33:41.000000000 , 2015-12-12T13:43:40.000000000--2015-12-12T13:58:42.000000000 , 2015-12-12T14:12:40.000000000--2015-12-12T14:37:42.000000000 , 2015-12-12T15:35:40.000000000--2015-12-12T15:40:41.000000000 , 2015-12-12T15:52:40.000000000--2015-12-12T15:52:41.000000000 , 2015-12-12T16:31:40.000000000--2015-12-12T16:38:41.000000000 , 2015-12-12T17:08:40.000000000--2015-12-12T17:28:41.000000000 , 2015-12-12T17:33:40.000000000--2015-12-12T17:41:42.000000000 , 2015-12-12T17:42:40.000000000--2015-12-12T17:51:41.000000000 , 2015-12-12T18:00:40.000000000--2015-12-12T18:15:41.000000000 , 2015-12-12T19:40:40.000000000--2015-12-12T19:45:41.000000000 , 2015-12-12T19:50:40.000000000--2015-12-12T19:51:41.000000000 , 2015-12-12T19:58:40.000000000--2015-12-12T20:09:41.000000000 , 2015-12-12T20:20:39.000000000--2015-12-12T20:22:41.000000000 , 2015-12-12T20:53:40.000000000--2015-12-12T20:54:40.000000000 , 2015-12-12T21:25:40.000000000--2015-12-12T21:26:41.000000000 , 2015-12-12T21:50:40.000000000--2015-12-12T22:07:41.000000000 , 2015-12-12T23:14:40.000000000--2015-12-12T23:15:41.000000000 , 2015-12-12T23:59:40.000000000--2015-12-13T00:01:41.000000000 , 2015-12-13T00:03:39.000000000--2015-12-13T00:05:41.000000000 , 2015-12-13T00:14:39.000000000--2015-12-13T00:17:40.000000000 , 2015-12-13T00:43:39.000000000--2015-12-13T00:53:41.000000000

The number of meterID which has decreased: 8890

Occurring periods: 2015-10-01T18:59:59.000000000--2015-10-01T19:07:10.000000000 , 2015-10-02T05:02:25.000000000--2015-10-02T05:12:56.000000000 , 2015-10-02T17:51:23.000000000--2015-10-02T17:51:56.000000000 , 2015-10-02T18:08:22.000000000--2015-10-02T18:08:48.000000000 , 2015-10-02T22:25:23.000000000--2015-10-02T22:34:48.000000000 , 2015-10-03T17:10:06.000000000--2015-10-03T17:10:06.000000000 , 2015-10-04T00:09:01.000000000--2015-10-04T00:24:52.000000000 , 2015-10-04T09:14:40.000000000--2015-10-04T09:28:03.000000000 , 2015-10-04T14:10:37.000000000--2015-10-04T14:11:06.000000000 , 2015-10-05T11:05:13.000000000--2015-10-05T11:09:08.000000000 , 2015-10-05T16:04:12.000000000--2015-10-05T16:13:04.000000000 , 2015-10-08T15:47:43.000000000--2015-10-08T15:51:04.000000000 , 2015-10-09T03:15:23.000000000--2015-10-09T03:17:11.000000000 , 2015-10-09T13:30:09.000000000--2015-10-09T13:41:00.000000000 , 2015-10-09T18:08:10.000000000--2015-10-09T18:18:55.000000000 , 2015-10-09T19:12:22.000000000--2015-10-09T19:16:03.000000000 , 2015-10-10T03:36:53.000000000--2015-10-10T03:41:04.000000000 , 2015-10-10T06:54:38.000000000--2015-10-10T07:14:54.000000000 , 2015-10-11T09:05:24.000000000--2015-10-11T09:16:02.000000000 , 2015-10-11T18:48:25.000000000--2015-10-11T18:58:10.000000000 , 2015-10-15T14:36:40.000000000--2015-10-15T14:54:20.000000000 , 2015-10-15T18:37:48.000000000--2015-10-15T18:47:17.000000000 , 2015-10-16T18:35:06.000000000--2015-10-16T18:41:02.000000000 , 2015-10-17T04:48:42.000000000--2015-10-17T05:03:11.000000000 , 2015-10-17T10:31:35.000000000--2015-10-17T10:39:08.000000000 , 2015-10-17T14:12:37.000000000--2015-10-17T14:33:01.000000000 , 2015-10-18T06:28:18.000000000--2015-10-18T06:39:13.000000000 , 2015-10-18T12:21:06.000000000--2015-10-18T12:25:02.000000000 , 2015-10-18T12:32:11.000000000--2015-10-18T12:38:03.000000000 , 2015-10-19T07:51:44.000000000--2015-10-19T08:00:12.000000000 , 2015-10-19T19:53:51.000000000--2015-10-19T19:59:14.000000000 , 2015-10-20T00:34:47.000000000--2015-10-20T00:39:15.000000000 , 2016-02-23T22:23:25.000000000--2016-02-23T22:23:45.000000000 , 2016-02-25T06:15:46.000000000--2016-02-25T06:16:58.000000000 , 2016-02-27T03:12:50.000000000--2016-02-27T03:14:57.000000000 , 2016-03-03T21:23:30.000000000--2016-03-03T21:28:01.000000000 , 2016-03-17T23:15:20.000000000--2016-03-17T23:21:23.000000000 , 2016-03-18T14:25:31.000000000--2016-03-18T14:31:03.000000000 , 2016-03-19T23:46:09.000000000--2016-03-19T23:47:02.000000000 , 2016-03-20T00:03:08.000000000--2016-03-20T00:05:03.000000000 , 2016-03-20T00:51:22.000000000--2016-03-20T00:55:10.000000000 , 2016-03-20T20:13:47.000000000--2016-03-20T20:16:10.000000000 , 2016-03-21T13:36:16.000000000--2016-03-21T13:39:05.000000000 , 2016-03-26T14:51:03.000000000--2016-03-26T15:03:15.000000000

The number of meterID which has decreased: 9134

Occurring periods: 2015-10-17T13:11:55.000000000--2015-10-17T13:27:19.000000000 , 2015-10-17T17:53:59.000000000--2015-10-17T17:55:08.000000000 , 2015-10-17T20:33:58.000000000--2015-10-17T20:37:04.000000000 , 2015-10-20T12:38:13.000000000--2015-10-20T12:44:1

6.000000000 , 2015-12-07T17:15:57.000000000--2015-12-07T17:16:58.000000000 , 2015-12-07T17:50:58.000000000--2015-12-07T17:55:05.000000000 , 2015-12-07T18:47:57.000000000--2015-12-07T18:50:16.000000000 , 2015-12-07T19:08:43.000000000--2015-12-07T19:39:10.000000000 , 2015-12-07T20:21:40.000000000--2015-12-07T20:59:01.000000000 , 2015-12-07T21:52:05.000000000--2015-12-07T21:55:03.000000000 , 2015-12-07T22:29:54.000000000--2015-12-07T22:41:08.000000000 , 2015-12-07T23:11:50.000000000--2015-12-07T23:49:08.000000000 , 2015-12-08T00:14:40.000000000--2015-12-08T01:10:03.000000000 , 2015-12-08T01:38:58.000000000--2015-12-08T01:47:02.000000000 , 2015-12-08T01:52:01.000000000--2015-12-08T02:03:00.000000000 , 2015-12-08T07:31:52.000000000--2015-12-08T08:02:14.000000000 , 2015-12-08T08:46:43.000000000--2015-12-08T09:09:02.000000000 , 2015-12-08T10:50:57.000000000--2015-12-08T10:53:05.000000000 , 2015-12-08T11:26:56.000000000--2015-12-08T11:41:16.000000000 , 2015-12-08T12:49:40.000000000--2015-12-08T12:54:14.000000000 , 2015-12-08T13:35:51.000000000--2015-12-08T14:00:59.000000000 , 2015-12-08T14:26:00.000000000--2015-12-08T14:33:00.000000000 , 2015-12-08T15:08:54.000000000--2015-12-08T15:23:12.000000000 , 2015-12-08T15:24:57.000000000--2015-12-08T15:44:20.000000000 , 2015-12-08T16:14:44.000000000--2015-12-08T16:17:11.000000000 , 2015-12-08T17:13:46.000000000--2015-12-08T17:15:10.000000000 , 2015-12-08T17:27:46.000000000--2015-12-08T17:34:01.000000000 , 2015-12-08T17:55:50.000000000--2015-12-08T18:01:59.000000000 , 2015-12-08T19:25:55.000000000--2015-12-08T19:42:08.000000000 , 2015-12-08T20:13:49.000000000--2015-12-08T20:19:16.000000000 , 2015-12-08T20:49:46.000000000--2015-12-08T21:20:12.000000000 , 2015-12-08T21:31:38.000000000--2015-12-08T21:38:59.000000000 , 2015-12-09T00:46:50.000000000--2015-12-09T00:49:12.000000000 , 2015-12-09T01:10:48.000000000--2015-12-09T01:19:07.000000000 , 2015-12-09T01:20:44.000000000--2015-12-09T01:31:13.000000000 , 2015-12-09T02:39:55.000000000--2015-12-09T02:52:59.000000000 , 2015-12-09T04:08:53.000000000--2015-12-09T04:59:11.000000000 , 2015-12-09T08:04:54.000000000--2015-12-09T08:11:12.000000000 , 2015-12-09T08:50:48.000000000--2015-12-09T09:43:07.000000000 , 2015-12-09T09:56:45.000000000--2015-12-09T09:59:11.000000000 , 2015-12-09T10:15:47.000000000--2015-12-09T10:16:58.000000000 , 2015-12-09T11:54:55.000000000--2015-12-09T12:07:08.000000000 , 2015-12-09T12:26:55.000000000--2015-12-09T13:11:14.000000000 , 2015-12-09T13:22:51.000000000--2015-12-09T13:29:11.000000000 , 2015-12-09T17:12:51.000000000--2015-12-09T17:37:12.000000000 , 2015-12-09T18:26:45.000000000--2015-12-09T18:34:05.000000000 , 2015-12-09T19:23:57.000000000--2015-12-09T19:40:59.000000000 , 2015-12-09T21:22:52.000000000--2015-12-09T21:23:19.000000000 , 2015-12-09T21:31:44.000000000--2015-12-09T22:25:12.000000000 , 2015-12-09T23:51:01.000000000--2015-12-10T00:23:05.000000000 , 2015-12-10T00:53:56.000000000--2015-12-10T00:55:11.000000000 , 2015-12-10T02:09:50.000000000--2015-12-10T02:48:11.000000000 , 2015-12-10T03:23:53.000000000--2015-12-10T03:26:03.000000000 , 2015-12-10T03:52:58.000000000--2015-12-10T03:58:56.000000000 , 2015-12-10T04:42:56.000000000--2015-12-10T05:23:14.000000000 , 2015-12-10T06:08:53.000000000--2015-12-10T06:17:11.000000000 , 2015-12-10T06:23:50.000000000--2015-12-10T06:40:09.000000000 , 2015-12-10T07:33:51.000000000--2015-12-10T08:12:56.000000000 , 2015-12-10T08:58:55.000000000--2015-12-10T09:00:08.000000000 , 2015-12-10T09:48:00.000000000--2015-12-10T10:04:20.000000000 , 2015-12-10T11:18:42.000000000--2015-12-10T11:34:01.000000000 , 2015-12-10T12:47:04.000000000--2015-12-10T13:03:07.000000000 , 2015-12-10T14:17:45.000000000--2015-12-10T14:28:10.000000000 , 2015-12-10T17:24:55.000000000--2015-12-10T18:17:16.000000000 , 2015-12-10T19:26:43.000000000--2015-12-10T19:27:12.000000000 , 2015-12-10T19:42:42.000000000--2015-12-10T20:10:05.000000000 , 2015-12-10T20:43:55.000000000--2015-12-10T20:59:02.000000000 , 2015-12-10T22:50:47.000000000--2015-12-10T22:51:11.000000000 , 2015-12-10T23:11:51.000000000--2015-12-10T23:49:11.000000000 , 2015-12-11T00:28:54.000000000--2015-12-11T00:34:04.000000000 , 2015-12-11T00:35:53.000000000--2015-12-11T00:37:01.000000000 , 2015-12-11T01:55:00.000000000--2015-12-11T02:14:12.000000000 , 2015-12-11T02:18:56.000000000--2015-12-11T02:40:14.000000000 , 2015-12-11T03:06:52.000000000--2015-12-11T03:53:14.000000000 , 2015-12-11T04:29:54.000000000--2015-12-11T04:38:03.000000000 , 2015-12-11T04:42:52.000000000--2015-12-11T04:43:04.000000000 , 2015-12-11T05:05:58.000000000--2015-12-11T05:39:00.000000000 , 2015-12-11T06:14:55.000000000--2015-12-11T06:21:12.000000000 , 2015-12-11T06:36:58.000000000--2015-12-11T06:44:20.000000000 , 2015-12-11T06:53:57.000000000--2015-12-11T07:13:13.000000000 , 2015-12-11T07:26:51.000000000--2015-12-11T07:35:10.000000000 , 2015-12-11T09:01:55.000000000--2015-12-11T09:02:58.000000000 , 2015-12-11T09:58:03.000000000--2015-12-11T10:04:07.000000000 , 2015-12-11T11:16:46.000000000--2015-12-11T11:47:10.000000000 , 2015-12-11T12:21:47.000000000--2015-12-11T12:23:11.000000000 , 2015-12-11T13:19:58.000000000--2015-12-11T13:20:03.000000000 , 2015-12-11T13:45:05.000000000--2015-12-11T13:48:00.000000000 , 2015-12-11T15:04:59.000000000--2015-12-11T15:05:17.000000000 , 2015-12-11T15:49:53.000000000--2015-12-11T15:53:11.000000000 , 2015-12-11T17:01:53.000000000--2015-12-11T17:26:58.000000000 , 2015-12-11T18:04:05.000000000--2015-12-11T18:20:03.000000000 , 2015-12-11T19:48:48.000000000--2015-12-11T20:01:12.000000000 , 2015-12-11T20:37:44.000000000

000--2015-12-11T20:39:12.000000000 , 2015-12-11T21:34:54.000000000--2015-12-11T21:40:59.000000000 , 2015-12-11T22:06:05.000000000--2015-12-11T22:07:00.000000000 , 2015-12-11T22:30:09.000000000--2015-12-11T22:46:08.000000000 , 2015-12-11T23:17:57.000000000--2015-12-11T23:20:11.000000000 , 2015-12-12T00:03:50.000000000--2015-12-12T00:17:11.000000000 , 2015-12-12T00:18:52.000000000--2015-12-12T00:20:10.000000000 , 2015-12-12T02:19:05.000000000--2015-12-12T02:37:02.000000000 , 2015-12-12T03:53:58.000000000--2015-12-12T04:06:17.000000000 , 2015-12-12T05:06:48.000000000--2015-12-12T05:09:14.000000000 , 2015-12-12T05:58:55.000000000--2015-12-12T06:02:58.000000000 , 2015-12-12T07:01:02.000000000--2015-12-12T07:05:07.000000000 , 2015-12-12T08:56:47.000000000--2015-12-12T09:06:08.000000000 , 2015-12-12T09:52:54.000000000--2015-12-12T09:53:06.000000000 , 2015-12-12T10:56:04.000000000--2015-12-12T11:05:00.000000000 , 2015-12-12T12:51:53.000000000--2015-12-12T12:52:13.000000000 , 2015-12-12T13:40:45.000000000--2015-12-12T14:19:04.000000000 , 2015-12-12T17:06:52.000000000--2015-12-12T18:03:56.000000000 , 2015-12-12T18:31:54.000000000--2015-12-12T19:18:56.000000000 , 2015-12-12T21:17:53.000000000--2015-12-12T22:53:59.000000000 , 2015-12-13T00:02:00.000000000--2015-12-13T00:35:13.000000000 , 2015-12-13T01:04:48.000000000--2015-12-13T01:09:15.000000000 , 2015-12-13T01:49:51.000000000--2015-12-13T02:01:12.000000000

The number of meterID which has decreased: 9639

Occurring periods: 2015-12-22T00:00:00.000000000--2015-12-22T00:27:07.000000000 , 2015-12-22T11:22:30.000000000--2015-12-22T11:54:52.000000000

The number of meterID which has decreased: 9982

Occurring periods: 2015-12-08T14:50:53.000000000--2015-12-08T20:31:41.000000000 , 2015-12-11T12:17:07.000000000--2015-12-11T12:29:49.000000000