Package ‘ukgasapi’

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Title API for UK Energy Market Information
Version 0.21
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Description Allows users to access live UK energy market information via various APIs.
Depends R (>= 3.0.0)

BugReports https://github.com/timothywong731/ukgasapi/issues
License GPL-2
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**bmrsIndoItsdo**

**BMRS Initial Demand Outturn API Service**

**Description**

This function connects to the Elexon's BMRS API to retrieve Initial Demand Outturn (INDO) and Initial Transmission System Demand Out-Turn (ITSDO) data. Internet connection must be available.

**Usage**

```r
bmrsIndoItsdo(
  fromdate,
  todate,
  apikey,
  batchsize = 60,
  apiurl = "https://api.bmreports.com/BMRS/INDOITSDO/v1"
)
```

**Arguments**

- `fromdate`: A character object specifying the start date. Date is inclusive.
- `todate`: A character object specifying the end date. Date is inclusive.
- `apikey`: A character object specifying the API key. This is also known as scripting key on Elexon’s website.
- `batchsize`: An interger value indicating the batch size of each API call. (Number of days included in one call)
- `apiurl`: A character object which points to the BMRS INDO/ITSDO API. Under most circumstances users do not have to change this. Default to 'https://api.bmreports.com/BMRS/INDOITSDO/v1'.

**Details**

The function submits a request to the API. The response is in CSV format which function will parse internally and returns a R dataframe object. The data returned by this API is identical to the data displayed on BMRS dashboard [https://www.bmreports.com/bmrs/?q=demand/initialdemandoutturn](https://www.bmreports.com/bmrs/?q=demand/initialdemandoutturn).

**Value**

A dataframe object containing API response data.

**Author(s)**

Timothy Wong, <timothy.wong@hotmail.co.uk>
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References

- BMRS API and Data Push User Guide
- Scripting Guide
  https://www.elexonportal.co.uk/scripting
- Initial Demand Outturn (INDO)
  https://www.bmreports.com/bmrs/?q=help/glossary#INDO
- Initial Transmission System Demand Out-Turn (ITSDO)
  https://www.bmreports.com/bmrs/?q=help/glossary#ITSDO

Examples

```r
## Not run:
# Invoke the API (requires internet connection at this step)
response <- bmrsIndoItsdo(fromdate = "2020-01-01",
todate = "2020-01-10",
apikey = "your api key goes here")

# Visualise the results on a chart
library(ggplot2)
ggplot(response, aes(x=publishtime, y=value,colour=recordtype)) +
  geom_line()
## End(Not run)
```

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**dataItemExplorer**

*Data Item Explorer API*

**Description**

This function connects to the UK National Grid’s API for Data Item Explorer, which is a major data source for gas-related information. Internet connection must be available.

**Usage**

```r
dataItemExplorer(  
dataitems,  
fromdate,  
todate,  
datetype = "gasday",  
latestflag = "Y",  
applicableforflag = "Y",  
batchsize = -1,  
apiurl = paste0("https://marketinformation.natgrid.co.uk/",
  "MIPIws-public/public/publicwebservice.asmx")
)
```
Arguments

dataitems  A vector of characters containing data items to enquire via API.
fromdate  A character object specifying the start date. Date is inclusive.
todate  A character object specifying the end date. Date is inclusive.
datatype  A character object specifying the data type. Defaults to `gasday`.
latestflag  A character object with length of one to specify whether to extract the latest data. This can either be `Y` or `N`. Defaults to `Y`.
applicableforflag  A character object with length of one to specify whether dates specified are 'applicable for' or 'applicable on'. This can either be `Y` or `N` where `Y` indicates 'applicable for'. Defaults to `Y`.
batchsize  An integer value indicating the batch size of each API call. To invoke a single API call, use zero or negative values.
apiurl  A character object which points to National Grid's SOAP API. Under most circumstances users do not have to change this. Default to `http://marketinformation.natgrid.co.uk/MIPIws-public/public/publicwebservice.asmx`.

Details

The function submits a request to the API using XML over SOAP protocol. The response is in XML format which function will parse internally and returns a R dataframe object.

Value

A dataframe object containing API response data.

Author(s)

Timothy Wong, <timothy.wong@hotmail.co.uk>

References

- Graphical User Interface for Data Item Explorer
  https://mip-prd-web.azurewebsites.net/DataItemExplorer
- API specification
  https://marketinformation.natgrid.co.uk/MIPIws-public/public/publicwebservice.asmx?op=GetPublicationDataWM

Examples

```r
## Not run:
# Specify the data item(s) to enquire from API
dataitems <- c("Storage Injection, Actual",
               "Storage Withdrawal, Actual")

# Invoke the API (requires internet connection at this step)
response <- dataItemExplorer(dataitems,
```
dataItemExplorer

fromdate = "2020-01-01",
todate="2020-01-31")

# Visualise the results on a chart
library(ggplot2)
ggplot(response,aes(x=ApplicableFor,y=Value,colour=PublicationObjectName)) +
  geom_line()

## End(Not run)
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