

Package ‘EIAdata’

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Type Package

Title R Wrapper for the Energy Information Administration (EIA) API

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URL <https://github.com/Matt-Brigida/EIAdata>

BugReports <https://github.com/Matt-Brigida/EIAdata/issues>

Description An R wrapper to allow the user to query categories and Series IDs, and import data, from the EIA's API <<https://www.eia.gov/opendata/>>.

Depends R (>= 2.11.0), XML, xts, zoo, httr

License GPL-2

NeedsCompilation no

Repository CRAN

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EIAdata-package *R wrapper for the US Energy Information Administration's (EIA's) API.*

Description

This package allows the user to query categories, and import data, through the EIA's API. Resulting time series are objects of class xts. The EIA API offers access to over a million unique time series. The package also contains a function which returns the latest EIA Natural Gas Storage Report.

Details

Package: EIAdata
Type: Package
Version: 0.1.2
Date: 2022-01-10
License: GPL-2

Author(s)

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References

<http://www.eia.gov/beta/api/>

Examples

```
## Not run:  
# \dontrun is used here because the functions require a valid EIA API key.  
  
# While API keys are free, they are best kept private.  
  
# Be sure to load your EIA key. You can request one  
# here: http://www.eia.gov/beta/api/register.cfm  
  
key <- "your_key"  
  
# To see the top of the data category hierarchy.  
  
getCatEIA(key=key)  
  
# To see the subcategories and data sets in a particular category (for example 40827).
```

```

getCatEIA(key=key, cat=40827)

# To download and return a time series object of class xts
# for example ELEC.PLANT.GEN.13-WAT-ALL.Q

getEIA(ID = "ELEC.PLANT.GEN.13-WAT-ALL.Q", key = key)

# The if the EIA series ID contains a "-", the function will replace
# this with a ".". So the call above will return a time series of
# class xts named ELEC.PLANT.GEN.13.WAT.ALL.Q

## End(Not run)

```

getCatEIA	<i>A function to view the sub and parent categories of an Energy Information Administration (EIA) API data category.</i>
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Description

A function to view the sub and parent categories of a EIA API data category. The function will return Series IDs in a category if present.

Usage

```
getCatEIA(cat = 999999999, key)
```

Arguments

key	Your EIA API key, in quotes.
cat	An EIA API data category number.

Author(s)

Matthew Brigida

Examples

```

## The function is currently defined as
getCatEIA <- function(cat=999999999, key){

  key <- unlist(strsplit(key, ";"))

  ifelse(cat==999999999,
    url <- paste("http://api.eia.gov/category?api_key=",
      key, "&out=xml", sep=""),
    url <- paste("http://api.eia.gov/category?api_key=", key,

```

```

                                "&category_id=", cat, "&out=xml", sep="" )
)
for( i in 1:3 ) {
  doc <- tryCatch(readLines(url, warn = FALSE), error = function(w) FALSE)
  if (class(doc) != "logical"){
    doc <- xmlParse(doc)
    break
  }
  else
    if(i == 3)
      stop(paste0("Attempted to retrieve data for category #", cat,
                  " and failed ", i, " times. \n This is likely due to a
                  communication error ",
                  "with the EIA website."))
}

Parent_Category <- tryCatch(xmlToDataFrame(
  nodes = XML::getNodeSet(doc, "//category/parent_category_id"),
  warning=function(w) FALSE, error=function(w) FALSE)

Sub_Categories <- xmlToDataFrame(nodes = XML::getNodeSet(doc, "//childcategories/row"))

Series_IDs <- xmlToDataFrame(nodes = XML::getNodeSet(doc, "//childseries/row"))

Categories <- list(Parent_Category, Sub_Categories, Series_IDs)
names(Categories) <- c("Parent_Category", "Sub_Categories", "Series_IDs")

return(Categories)
}

```

getEIA

A function to download data from the Energy Information Administration's (EIA's) API.

Description

A function to download data from the EIA's API. Resulting time series are of class xts.

Usage

```
getEIA(ID, key)
```

Arguments

ID	The EIA API Series ID for the data.
key	Your EIA API key.

Value

xts object (time series)

Author(s)

Matthew Brigida

Examples

```
## The function is currently defined as
function (ID, key)
{
  switch(.last_char(ID), A = .getAnnEIA(ID, key = key), Q = .getQEIA(ID,
    key = key), M = .getMonEIA(ID, key = key), W = .getWDEIA(ID,
    key = key), D = .getWDEIA(ID, key = key),
    print("ERROR: The last
    character of your ID is not one of the possible sampling
    frequencies (A, Q, M, W, or D)"))
}
```

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