Package: resios (via r-universe)

September 16, 2024

Type Package

Title Interacts with REE and ESIOS API

Version 0.1.0.9003

Description Provides functions to retrieve and use easily data from Red Electrica Española (REE) the which operates the national electricity grid in Spain. The REE also provides ESIOS from electronic-``Sistema de Información del Operador del Sistema", which is also covered here.

License MIT + file LICENSE

URL https://github.com/ropenspain/resios, https://ropenspain.github.io/resios/

BugReports https://github.com/ropenspain/resios/issues

Depends R (>= 4.2)

Imports httr2 (>= 0.2.3), methods

Suggests testthat (>= 3.0.0)

Config/Needs/website rmarkdown

Config/testthat/edition 3

Encoding UTF-8

Roxygen list(markdown = TRUE)

RoxygenNote 7.3.2

Language en

Repository https://ropenspain.r-universe.dev

RemoteUrl https://github.com/rOpenSpain/resios

RemoteRef HEAD

RemoteSha 242ab87c5e44ab78f8d377be208becd5bd008c77

Contents

`esios_archives` *Retrieve archives from ESIOS*

Description

Check which archives are available.

Usage

```
esios_archives()
```

Value

A data.frame with the information of what is available and where.

Examples

```
archives <- esios_archives()
head(archives)
```

`esios_indicators` *Retrieve an indicator*

Description

Retrieve the information of any indicator based on the id.

Usage

```
esios_indicators(
  indicator,
  locale = NULL,
  datetime = NULL,
  start_date = NULL,
  end_date = NULL,
  time_agg = NULL,
  time_trunc = NULL,
  geo_agg = NULL,
  geo_ids = NULL,
  geo_trunc = NULL
)
```

Arguments

indicator	ID code for an indicator
locale	Get translations for sources (es, en). Default language: es
datetime	A certain date to filter values by (iso8601 format)
start_date	Beginning of the date range to filter indicator values (iso8601 format)
end_date	End of the date range to filter indicator values (iso8601 format)
time_agg	How to aggregate indicator values when grouping them by time. Accepted values: 'sum', 'average'. Default value: 'sum'.
time_trunc	Tells the API how to trunc data time series. Accepted values: 'five_minutes', 'ten_minutes', 'fifteen_minutes', 'hour', 'day', 'month', 'year'.
geo_agg	How to aggregate indicator values when grouping them by geo_id. Accepted values: 'sum', 'average'. Default value: 'sum'.
geo_ids	Tells the API the geo ids to filter the date.
geo_trunc	Tells the API how to group data at geolocalization level when the geo_agg is informed. Accepted values: 'country', 'electric_system', 'autonomous_community', 'province', 'electric_subsystem', 'town' and 'drainage_basin'.

References

https://api.esios.ree.es/

See Also

esios_search_indicators()

Examples

```
ei10001 <- esios_indicators(10001)
head(ei10001)
```

`esios_pvpc` *Prediction of electricity prices using indicator 1001*

Description

This is a shortcut for `esios_indicators("1001")` with some parsing.

Usage

```
esios_pvpc(
  locale = NULL,
  datetime = NULL,
  start_date = NULL,
  end_date = NULL,
  time_agg = NULL,
  time_trunc = NULL,
  geo_agg = NULL,
  geo_ids = NULL,
  geo_trunc = NULL
)
```

Arguments

`locale`	Get translations for sources (es, en). Default language: es
`datetime`	A certain date to filter values by (iso8601 format)
`start_date`	Beginning of the date range to filter indicator values (iso8601 format)
`end_date`	End of the date range to filter indicator values (iso8601 format)
`time_agg`	How to aggregate indicator values when grouping them by time. Accepted values: 'sum', 'average'. Default value: 'sum'.
`time_trunc`	Tells the API how to trunc data time series. Accepted values: 'five_minutes', 'ten_minutes', 'fifteen_minutes', 'hour', 'day', 'month', 'year'.
`geo_agg`	How to aggregate indicator values when grouping them by geo_id. Accepted values: 'sum', 'average'. Default value: 'sum'.
`geo_ids`	Tells the API the geo ids to filter the date.
`geo_trunc`	Tells the API how to group data at geolocalization level when the geo_agg is informed. Accepted values: 'country', 'electric_system', 'autonomous_community', 'province', 'electric_subsystem', 'town' and 'drainage_basin'.

Value

A data.frame with value (€/MWh), datetime, datetime_utc, tz_time, geo_id and geo_name.

See Also

`esios_indicators()`

Examples

```
e <- esios_pvpc()
```

`esios_search_indicators` *List ESIOS indicators*

Description

Find which indicators are available.

Usage

```
esios_search_indicators(
  text = NULL,
  taxonomy_terms = NULL,
  taxonomy_ids = NULL
)
```

Arguments

`text`	Text to search indicators
`taxonomy_terms`	Terms of indicators
`taxonomy_ids`	Ids of the indicators

Value

A data.frame with four columns: name, description, short_name and id.

See Also

`esios_indicators()`

Examples

```
ei <- esios_search_indicators()
mercados <- esios_search_indicators(text = "Mercados y precios")
```

get_ree_ccaa *Get all the CCAA available*

Description

Get all the CCAA available

Usage

```
get_ree_ccaa()
```

Value

A vector with the regions

See Also

ree_call()

Examples

```
get_ree_ccaa()
```

get_token *Get ESIOS token*

Description

To get a token you need to ask for it.

Usage

```
get_token(token = NULL)
```

Arguments

token	The character string as a token

Value

Invisible the token

Examples

```
token <- get_token("aahdahgagdadfsafd")
```

ree_call *Retrieve data from Red Electrica Española.*

Description

Retrieve data from Red Electrica Española.

Usage

```
ree_call(
  category,
  widget,
  start_date = end_date - 1,
  end_date = Sys.Date(),
  time_trunc = NULL,
  geo_trunc = NULL,
  region = "peninsular",
  lang = "es",
  parse = TRUE,
  ...
)
```

Arguments

category	Type of data, one of c("balance", "demanda", "generacion", "intercambios", "transporte").
widget	Defines what to retrieve.
start_date	Date
end_date	Date
time_trunc	One of `c("hour", "day", "month", "year")`
geo_trunc	Only accepts "electric_system".
region	One of `c("peninsular", "canarias", "baleares", "ceuta", "melilla")` or the official name of a CCAA (one of `get_ree_ccaa()`).
lang	Language: either "es" or "en".
parse	Decide if the function should try to parse the result or not (By default TRUE).
...	Other arguments passed to `httr2::req_url_query()`.

Value

A data.frame by default or a list if `parse = FALSE`.

Examples

```
rc <- ree_call(start_date = as.Date("2018-01-01"),
               end_date = "2018-12-31T23:59",
               time_trunc = "month",
               region = "peninsular", lang = "en",
               category = "demanda", widget = "ire-general")
# rc2 <- ree_call(category = "balance", widget = "balance-electrico",
#                 start_date = "2022-12-31T23:59",
#                 region = "peninsular", lang = "en", time_trunc = "day")
# rc3 <- ree_call(lang = "es",
#                 category = "generacion",
#                 widget = "estructura-generacion",
#                 start_date = "2014-01-01T00:00",
#                 end_date = "2018-12-31T23:59",
#                 time_trunc = "year",
#                 geo_trunc = "electric_system",
#                 region = "Castilla la Mancha")
```

Index