Package: pacta.scenario.data.preparation (via r-universe)

September 9, 2024

Title What the Package Does (One Line, Title Case)

Version 0.0.0.9000

Description What the package does (one paragraph).

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Encoding UTF-8

Roxygen list(markdown = TRUE)

RoxygenNote 7.3.2

Suggests covr, here, readr, testthat (>= 3.0.0), tidyxl

Config/testthat/edition 3

Config/Needs/website rmi-pacta/pacta.pkgdown.rmitemplate

Imports dplyr, glue, janitor, pacta.data.validation, purrr, rlang, stringr, tidyr, unpivotr, zoo

Remotes RMI-PACTA/pacta.data.validation

Depends R (>= 3.5.0)

LazyData true

Repository https://rmi-pacta.r-universe.dev

RemoteUrl https://github.com/rmi-pacta/pacta.scenario.data.preparation

RemoteRef HEAD

RemoteSha aea39197d1e3f6b718f392783ecc1a6a9ea95b93

Contents

`add_market_share_columns` *Add market share columns to a scenario dataset*

Description

Calculates and adds market share values (ie. technology market-share ratio and sector market-share percentage) to a scenario dataset. A reference start-year must be provided.

Usage

```
add_market_share_columns(data, reference_year)
```

Arguments

`data`	A scenario dataset, like FIXME: Define an exported demo scenario.
`reference_year`	The baseline year, against which the technology- and sector- market shares will be calculated. Note: At the start year, tmsr = 1 and smsp = 0 respectively.

Value

A scenario dataset, with the new columns `tmsr` and `smsp`.

`format_p4b` *Format scenario data for P4B*

Description

Format scenario data for P4B

Usage

```
format_p4b(data)
```

Arguments

`data`	A scenario data-frame following the format created in the prepare_*.R scripts.

Value

A scenario data-frame with columns renamed to be consistent with r2dii.analysis target_market_share input requirements.

`format_p4b_ei` *Format scenario data for P4B*

Description

Format scenario data for P4B

Usage

```
format_p4b_ei(data)
```

Arguments

`data`	A scenario data-frame following the format created in the prepare_*.R scripts.

Value

A scenario data-frame with columns renamed to be consistent with r2dii.analysis target_sda input requirements.

`format_p4i` *Format scenario data for P4I*

Description

Format scenario data for P4I

Usage

```
format_p4i(data, green_techs)
```

Arguments

`data`	A scenario dataset.
`green_techs`	A list of green technologies. For these, a `direction` of "increasing" will be assigned, and the `smsp` column will be used to assign a `fair_share_perc`. Otherwise the `direction` will be `decreasing` and the `tmsr` column will be used.

Value

A scenario dataset, with columns renamed to be consistent with pacta.data.preparation input requirements.

`interpolate_yearly` *Interpolate values in a dataset, by year. Interpolate values in a dataset, by year.*

Description

Interpolate values in a dataset, by year. Interpolate values in a dataset, by year.

Usage

```
interpolate_yearly(data, ...)
```

Arguments

`data`	An input dataset. Must contain the columns `year` and `value`.
`...`	Other grouping variables. `value` will be interpolated for each group.

Value

A dataset with the column `value` interpolated linearly against the column `year`.

`prepare_geco_2022_scenario` *Prepare GECO 2022 scenario data*

Description

Prepare GECO 2022 scenario data

Usage

```
prepare_geco_2022_scenario(
  geco_2022_automotive_raw,
  geco_2022_aviation_raw,
  geco_2022_fossil_fuels_15c_raw,
  geco_2022_fossil_fuels_ndc_raw,
  geco_2022_fossil_fuels_ref_raw,
  geco_2022_power_15c_raw,
  geco_2022_power_ndc_raw,
  geco_2022_power_ref_raw,
  geco_2022_steel_raw
)
```

Arguments

`geco_2022_automotive_raw`
: A raw GECO 2022 automotive scenario data-frame.

`geco_2022_aviation_raw`
: A raw GECO 2022 aviation scenario data-frame.

`geco_2022_fossil_fuels_15c_raw`
: A raw GECO 2022 fossil fuels 1.5C scenario data-frame.

`geco_2022_fossil_fuels_ndc_raw`
: A raw GECO 2022 fossil fuels NDC scenario data-frame.

`geco_2022_fossil_fuels_ref_raw`
: A raw GECO 2022 fossil fuels reference scenario data-frame.

`geco_2022_power_15c_raw`
: A raw GECO 2022 power 1.5C scenario data-frame.

`geco_2022_power_ndc_raw`
: A raw GECO 2022 power NDC scenario data-frame.

`geco_2022_power_ref_raw`
: A raw GECO 2022 power reference scenario data-frame.

`geco_2022_steel_raw`
: A raw GECO 2022 steel scenario data-frame.

Value

A prepared GECO 2022 scenario data-frame.

`prepare_geco_2023_scenario` *Prepare GECO 2023 scenario data*

Description

Prepare GECO 2023 scenario data

Usage

```
prepare_geco_2023_scenario(
  geco_2023_aviation_15c_raw,
  geco_2023_aviation_ndc_raw,
  geco_2023_aviation_ref_raw,
  geco_2023_fossil_fuels_15c_raw,
  geco_2023_fossil_fuels_ndc_raw,
  geco_2023_fossil_fuels_ref_raw,
  geco_2023_power_cap_15c_raw,
  geco_2023_power_cap_ndc_raw,
  geco_2023_power_cap_ref_raw,
  geco_2023_steel_15c_raw,
  geco_2023_steel_ndc_raw,
```

```
  geco_2023_steel_ref_raw,
  geco_2023_supplement_15c_raw,
  geco_2023_supplement_ndc_raw,
  geco_2023_supplement_ref_raw
)
```

Arguments

`geco_2023_aviation_15c_raw`
: A raw GECO 2023 automotive 1.5 scenario data-frame.

`geco_2023_aviation_ndc_raw`
: A raw GECO 2023 automotive NDC scenario data-frame.

`geco_2023_aviation_ref_raw`
: A raw GECO 2023 automotive Reference scenario data-frame.

`geco_2023_fossil_fuels_15c_raw`
: A raw GECO 2023 fossil fuels 1.5 scenario data-frame.

`geco_2023_fossil_fuels_ndc_raw`
: A raw GECO 2023 fossil fuels NDC scenario data-frame.

`geco_2023_fossil_fuels_ref_raw`
: A raw GECO 2023 fossil fuels Reference scenario data-frame.

`geco_2023_power_cap_15c_raw`
: A raw GECO 2023 power capacity 1.5 scenario data-frame.

`geco_2023_power_cap_ndc_raw`
: A raw GECO 2023 power capacity NDC scenario data-frame.

`geco_2023_power_cap_ref_raw`
: A raw GECO 2023 power capacity Reference scenario data-frame.

`geco_2023_steel_15c_raw`
: A raw GECO 2023 steel 1.5 scenario data-frame.

`geco_2023_steel_ndc_raw`
: A raw GECO 2023 steel NDC scenario data-frame.

`geco_2023_steel_ref_raw`
: A raw GECO 2023 steel Reference scenario data-frame.

`geco_2023_supplement_15c_raw`
: A raw GECO 2023 supplemental 1.5 scenario data-frame.

`geco_2023_supplement_ndc_raw`
: A raw GECO 2023 supplemental NDC scenario data-frame.

`geco_2023_supplement_ref_raw`
: A raw GECO 2023 supplemental Reference scenario data-frame.

Value

A prepared GECO 2023 scenario data-frame.

prepare_isf_2021_scenario *Prepare ISF 2021 scenario data*

Description

Prepare ISF 2021 scenario data

Usage

```
prepare_isf_2021_scenario(isf_2021_power_raw, isf_2021_not_power_raw)
```

Arguments

isf_2021_power_raw	A tidyxl data frame containing a raw import of NZAOA_raw_data_power.xlsx.
isf_2021_not_power_raw	A tidyxl data frame containing a raw import of NZAOA_rawdata_notpower_P4I.xlsx.

Value

A prepared ISF 2021 scenario data-frame.

prepare_isf_2023_scenario *Prepare ISF 2023 scenario data*

Description

Prepare ISF 2023 scenario data

Usage

```
prepare_isf_2023_scenario(
  isf_2023_scope_global_raw,
  isf_2023_s_global_raw,
  isf_2023_annex_countries_raw
)
```

Arguments

`isf_2023_scope_global_raw`
: A tidyxl data frame (with a `formats` attribute) with a raw ISF Scope Global 2023 import.

`isf_2023_s_global_raw`
: A tidyxl data frame (with a `formats` attribute) with a raw ISF S_Global 2023 import.

`isf_2023_annex_countries_raw`
: A list of tidyxl data frames (with a `formats` attribute) containing the raw import of each of the Annex Countries xlsx files for ISF 2023.

Value

A prepared ISF 2023 scenario data-frame.

`prepare_weo_2022_scenario` *Prepare WEO 2022 scenario data*

Description

Prepare WEO 2022 scenario data

Usage

```
prepare_weo_2022_scenario(
  weo_2022_ext_data_regions_raw,
  weo_2022_ext_data_world_raw,
  weo_2022_fossil_fuels_raw,
  weo_2022_nze_auto_raw,
  weo_2022_nze_steel_raw,
  weo_2022_sales_aps_auto_raw,
  weo_2022_electric_sales_aps_auto_raw
)
```

Arguments

`weo_2022_ext_data_regions_raw`
: A data frame containing a raw import of `WEO2022_Extended_Data_Regions.csv`.

`weo_2022_ext_data_world_raw`
: A data frame containing a raw import of `WEO2022_Extended_Data_World.csv`.

`weo_2022_fossil_fuels_raw`
: A data frame containing a raw import of `weo2022_fossilfuel_demand_supply.csv`.

`weo_2022_nze_auto_raw`
: A tidyxl data frame with a raw `NZE2021_RawData_2050.xlsx` import.

`weo_2022_nze_steel_raw`
: A data frame containing a raw import of `WEO2022_NZE_SteelData.csv`.

`weo_2022_sales_aps_auto_raw`
: A data frame containing a raw import of `SalesAPS_rawdata.csv`.

`weo_2022_electric_sales_aps_auto_raw`
: A data frame containing a raw import of `IEA-EV-dataEV salesCarsProjection-APS.csv`.

Value

A prepared WEO 2022 scenario data-frame.

`prepare_weo_2023_scenario` *Prepare WEO 2023 scenario data*

Description

Prepare WEO 2023 scenario data

Usage

```
prepare_weo_2023_scenario(
  weo_2023_ext_data_regions_raw,
  weo_2023_ext_data_world_raw,
  weo_2023_fig_chptr_3_raw,
  iea_global_ev_raw,
  mpp_ats_raw
)
```

Arguments

`weo_2023_ext_data_regions_raw`
: A data frame containing a raw `WEO2023_Extended_Data_Regions.csv` import.

`weo_2023_ext_data_world_raw`
: A data frame containing a raw `WEO2023_Extended_Data_World.csv` import.

`weo_2023_fig_chptr_3_raw`
: A tidyxl data frame containing a raw import of `WEO2023_Figures_Chapter_03.xlsx`.

`iea_global_ev_raw`
: A data frame containing a raw `IEA Global EV Data 2023.csv` import.

`mpp_ats_raw`
: A tidyxl data frame containing a raw import of ‘2022-08-12

  - MPP ATS - RPK and GHG intensity.xlsx‘.

Value

A prepared WEO 2023 scenario data-frame.

scenario_regions *A dataset of countries contained in different scenario regions.*

Description

This dataset contains a map of each scenario region name, along with all countries defined within that region (as per the country's ISO2 code).

Usage

```
scenario_regions
```

Format

An object of class `spec_tbl_df` (inherits from `tbl_df`, `tbl`, `data.frame`) with 1492 rows and 4 columns.

Examples

```
head(scenario_regions)
```

scenario_source_pacta_geography_bridge *A dataset that maps scenario regions as defined by their source, to a list of PACTA compatible scenario regions.*

Description

Scenario providers often define their own, tailor-made lists of what countries form a region. The entire concept of a region is not standardized and can even change year on year. However, for the purpose of the PACTA transition monitor website, it is useful to have a minimal set of comparable regions, to cycle through different scenarios for. Right now, these regions are the "Global" region, which contains all countries, and the "OECD" and "NonOECD" regions.

This dataset provides a bridge between whatever the scenario has labelled these regions as (e.g. "WORLD"), and the terminology that PACTA uses (e.g. "Global").

Usage

```
scenario_source_pacta_geography_bridge
```

Format

An object of class `spec_tbl_df` (inherits from `tbl_df`, `tbl`, `data.frame`) with 15 rows and 3 columns.

Examples

```
head(scenario_source_pacta_geography_bridge)
```

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