

Package: limes (via r-universe)

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Type Package

Title The liMES R package

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Description Contains the LIMES-specific routines for data and model output manipulation.

License LGPL-3

Depends gdx (≥ 1.29), magclass (≥ 3.37)

Imports rlang, rmarkdown, stringr, utils, yaml, ymlthis, madrat

Suggests knitr, covr, gdxrrw, testthat

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VignetteBuilder knitr

Config/pak/sysreqs git libglpk-dev make libgit2-dev libicu-dev libxml2-dev libssl-dev libx11-dev

Repository <https://pik-piam.r-universe.dev>

RemoteUrl <https://github.com/pik-piam/limes>

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limes-package

The LIMES R package

Description

Contains the LIMES-specific routines for data and model output manipulation

Details

Package: remind
Type: Package
Version: 7.6
Date: 2017-11-20
License: LGPL-3
LazyLoad: yes

Author(s)

Sebastian Osorio and Renato Rodrigues

Maintainer: Sebastian Osorio <sebastian.osorio@pik-potsdam.de>

compareScenariosLimes *Render compareScenariosLimes*

Description

Renders the *.Rmd-files associated to compareScenariosLimes. In the Rmds, scenario- and historical .mif-files are loaded. Then plots are created from this data. The result may be rendered to PDF or HTML. Alternatively one can choose Rmd as output format and obtain a copy of the *.Rmd-files.

Usage

```
compareScenariosLimes(  
  mifScen,  
  outputDir = getwd(),  
  outputFile = "compareScenariosLimes",  
  outputFormat = "PDF",  
  envir = new.env(),  
  quiet = FALSE,  
  ...  
)
```

Arguments

mifScen	character(n), optionally named. Paths to scenario mifs. If the vector has names, those are used to refer to the scenarios in the output file.
outputDir	character(1). The directory where the output document and intermediary files are created.
outputFile	character(1). File name (without extension) of the output document to be created.

outputFormat	character(1), not case-sensitive. "html", "pdf", or "rmd".
envir	environment. The environment in which the code chunks are to be evaluated. See the argument of the same name in <code>rmarkdown::render()</code> . Set this to <code>globalenv()</code> and sections to <code>NULL</code> to load an preprocess data in your global environment during development.
quiet	logical(1). Suppress printing during rendering?
...	YAML parameters, see below.

Value

The value returned by `rmarkdown::render()`.

YAML Parameters

cfgScen	character(n) or <code>NULL</code> . Paths to config.Rdata files containing the <code>cfg</code> object for each scenario. The paths must be provided in the same order as <code>mifScen</code> . If provided, some information gathered from these files is shown at the beginning of the output document.
cfgDefault	character(1) or <code>NULL</code> . Path to <code>default.cfg</code> , which creates a <code>cfg</code> object with default values. If provided, some information gathered from this file is shown at the beginning of the output document.
yearsScen	numeric(n). Default: <code>c(seq(2005, 2060, 5), seq(2070, 2100, 10))</code> . Years to show for scenario data.
yearsHist	numeric(n). Default: <code>c(seq(1960, 2020, 1), seq(2025, 2100, 5))</code> . Years to show for historical data.
yearsBarPlot	numeric(n). Default: <code>c(2010, 2030, 2050, 2100)</code> . Years to show in bar plots of scenario data.
yearRef	numeric(1). Default: 2020. A reference year used to show relative values in Kaya decomposition.
reg	<code>NULL</code> or character(n). Default: <code>NULL</code> . Regions to show. <code>NULL</code> means all.
modelsHistExclude	character(n) or <code>NULL</code> . Default: <code>c()</code> . Models in historical data to exclude.
sections	character(n) or numeric(n) or <code>NULL</code> . Default: "all". Names or numbers of sections to include. For names subset of <code>c("00_info", "01_summary", "02_macro", "03_emissions", "04_energy_supply", "05_energy_demand", "06_energy_services", "07_climate", "08_sdp", "09_carbon_management", "99_further_info")</code> . Use "all" to include all available sections. Use <code>NULL</code> to not include any section (useful in combination with parameter <code>envir</code>).
userSectionPath	<code>NULL</code> or character(n). Default: <code>NULL</code> . Path to a *.Rmd-file that may be included as additional section.
mainReg	character(1). Default: "World". A region for which larger plots are shown.
figWidth, figHeight	numeric(1). Default: 15 and 10, respectively. Size of plots in inches.
warning	logical(1). Default: <code>TRUE</code> . Show warnings in output?

Author(s)

Christof Schoetz

Examples

```
## Not run:
# Simple use. Creates PDF:
compareScenariosLimes(
  mifScen = c("path/to/Base.mif", "path/to/NDC.mif"),
  outputFile = "compareScenariosLimesExample")
# More complex use. Creates folder with Rmds:
compareScenariosLimes(
  mifScen = c(ScenarioName1 = "path/to/scen1.mif", ScenarioName2 = "path/to/scen2.mif"),
  cfgScen = c("path/to/scen1/config.RData", "path/to/scen2/config.RData"),
  cfgDefault = "path/to/default.cfg",
  outputDir = "path/to/output",
  outputFormat = "Rmd",
  outputFile = format(Sys.time(), "compScen_%Y%m%d-%H%M%S"),
  warning = FALSE,
  sections = c(0, 2, 3, 99),
  userSectionPath = "path/to/myPlots.Rmd")
# Use in development. Load data into global environment:
compareScenariosLimes(
  mifScen = c("path/to/scen1.mif", "path/to/scen2.mif"),
  outputFile = format(Sys.time(), "cs2_load_%Y%m%d-%H%M%S"),
  sections = NULL,
  envir = globalenv())

## End(Not run)
```

convGDX2MIF

*Read in GDX and write *.mif reporting*

Description

Read in all information from GDX file and create the *.mif reporting

Usage

```
convGDX2MIF(
  gdx,
  gdx_ref = NULL,
  file = NULL,
  scenario = "default",
  time = as.numeric(readGDX(gdx, name = "t"))
)
```

Arguments

gdx	a GDX as created by readGDX, or the file name of a gdx
gdx_ref	reference-gdx for policy costs, a GDX as created by readGDX, or the file name of a gdx

file name of the mif file which will be written, if no name is provided a magpie object containing all the reporting information is returned

scenario scenario name that is used in the *.mif reporting

time temporal resolution of the reporting, default: c(seq(2010,2050,5))

Author(s)

Sebastian Osorio and Renato Rodrigues

Examples

```
## Not run: convGDX2MIF(gdx,gdx_ref,file="LIMES_generic_default.csv",scenario="default")
```

convGDX2MIF_tau *Read in GDX and write *.mif time slice reporting*

Description

Read in all information from GDX file and create the *.mif reporting for the power generation at the time slice resolution

Usage

```
convGDX2MIF_tau(
  gdx,
  file = NULL,
  scenario = "default",
  time = as.numeric(readGDX(gdx, name = "t"))
)
```

Arguments

gdx a GDX as created by readGDX, or the file name of a gdx

file name of the mif file which will be written, if no name is provided a magpie object containing all the reporting information is returned

scenario scenario name that is used in the *.mif reporting

time temporal resolution of the reporting, default: c(seq(2010,2050,5))

Author(s)

Antoine Levesque

Examples

```
## Not run:  
convGDX2MIF_tau(gdx, file = "LIMES_tau_default.csv", scenario = "default")  
  
## End(Not run)
```

importParameters	<i>Read in GDX and import different parameters used in convGDX2MIF.R for intermediate calculations in the reporting</i>
------------------	---

Description

Read in GDX and import different parameters used in convGDX2MIF.R for intermediate calculations in the reporting

Usage

```
importParameters(gdx)
```

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx

Value

MAgPIE object - contains the capacity variables

Author(s)

Sebastian Osorio, Renato Rodrigues

See Also

[convGDX2MIF](#)

Examples

```
## Not run: importParameters(gdx)
```

limesAllocateYears *Allocating years to variables that do not change over time*

Description

Allocating years to variables that do not change over time

Usage

```
limesAllocateYears(var,.gdx)
```

Arguments

var	variable to be changed
gdx	a GDX as created by readGDX, or the file name of a.gdx

Author(s)

Sebastian Osorio

Examples

```
## Not run: limesAllocateYears(var)
```

limesDiscount *Discounting variables (matrix)*

Description

Discounting variables (matrix)

Usage

```
limesDiscount(var, .gdx)
```

Arguments

var	variable to be changed
gdx	a GDX as created by readGDX, or the file name of a.gdx

Author(s)

Sebastian Osorio

Examples

```
## Not run: limesDiscount(var)
```

limesInt2Ext	<i>mapping of weights for the variables for global aggregation</i>
--------------	--

Description

mapping of weights for the variables for global aggregation

Usage

```
limesInt2Ext(gdx, output, reporting_tau = FALSE, mappingPath = NULL)
```

Arguments

gdx	a GDX as created by readGDX, or the file name of a gdx
output	variable to be changed
reporting_tau	boolean determining whether to generate the tau reports
mappingPath	path to mapping file

Author(s)

Sebastian Osorio and Renato Rodrigues

limesMapping	<i>Mapping limes iso 2 codes to iso 3 codes</i>
--------------	---

Description

Mapping limes iso 2 codes to iso 3 codes

Usage

```
limesMapping(var, mappingPath = NULL)
```

Arguments

var	variable to be changed
mappingPath	path to mapping file

Author(s)

Sebastian Osorio and Renato Rodrigues

Examples

```
## Not run: LIMESMapping(var,mappingPath="R/mapping/mapping.csv")
```

modelstat	<i>modelstat</i>
-----------	------------------

Description

LIMES model status of optimization

Usage

```
modelstat(gdx, file = NULL)
```

Arguments

gdx	GDX file
file	a file name the output should be written to using write.magpie

Value

A MAgPIE object containing the modelstat

Author(s)

David Klein

Examples

```
## Not run:  
x <- modelstat(gdx)  
  
## End(Not run)
```

reportAdequacyContribution

Read in GDX and calculate capacities, used in convGDX2MIF.R for the reporting

Description

Read in Capacity Adequacy information from GDX file, information used in convGDX2MIF.R for the reporting

Usage

reportAdequacyContribution(gdx)

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx

Value

MAGPIE object - contains the Capacity Adequacy variables

Author(s)

Sebastian Osorio, Renato Rodrigues

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportCapacity Adequacy(gdx)
```

reportAnnualAvFactor *Read in GDX and report the annual availability factor (for nonRES), used in convGDX2MIF.R for the reporting*

Description

Read in annual availability factors (for nonRES) information from GDX file, information used in convGDX2MIF.R for the reporting

Usage

reportAnnualAvFactor(gdx)

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx

Value

MAGPIE object - contains the annual availability factors (for nonRES)

Author(s)

Sebastian Osorio, Renato Rodrigues

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportAnnualAvFactor(gdx)
```

reportBuildings	<i>Read in GDX and calculate buildings variables, used in convGDX2MIF.R for the reporting</i>
-----------------	---

Description

Read in (net and gross) demand data from GDX file, information used in convGDX2MIF.R for the reporting

Usage

```
reportBuildings(gdx, output = NULL)
```

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx
output a magpie object containing all needed variables generated by other report*.R functions

Value

MAGPIE object - contains buildings module variables

Author(s)

Sebastian Osorio

See Also

[convGDX2MIF](#)

Examples

```
## Not run:  
reportBuildings(gdx)  
  
## End(Not run)
```

reportBuildtime	<i>Read in GDX and report the plant buildtime, used in convGDX2MIF.R for the reporting</i>
-----------------	--

Description

Read in buildtime information from GDX file, information used in convGDX2MIF.R for the reporting

Usage

```
reportBuildtime(gdx)
```

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx

Value

MAGPIE object - contains the buildtimes

Author(s)

Sebastian Osorio, Renato Rodrigues

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportBuildtime(gdx)
```

reportCapacity	<i>Read in GDX and calculate capacities, used in convGDX2MIF.R for the reporting</i>
----------------	--

Description

Read in capacity information from GDX file, information used in convGDX2MIF.R for the reporting

Usage

```
reportCapacity(gdx)
```

Arguments

gdx	a GDX object as created by readGDX, or the path to a gdx
-----	--

Value

MAGPIE object - contains the capacity variables

Author(s)

Sebastian Osorio, Renato Rodrigues

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportCapacity(gdx)
```

reportCapacityAdditions	<i>Read in GDX and calculate capacity additions, used in convGDX2MIF.R for the reporting</i>
-------------------------	--

Description

Read in capacity additions from GDX file, information used in convGDX2MIF.R for the reporting

Usage

```
reportCapacityAdditions(gdx)
```

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx

Value

MAGPIE object - contains the capacity variables

Author(s)

Sebastian Osorio

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportCapacityAdditions(gdx)
```

reportCapitalCosts	<i>Read in GDX and report fuel costs, used in convGDX2MIF.R for the reporting</i>
--------------------	---

Description

Read in fuel costs information from GDX file, information used in convGDX2MIF.R for the reporting

Usage

```
reportCapitalCosts(gdx)
```

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx

Value

MAGPIE object - contains the fuel costs

Author(s)

Sebastian Osorio

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportFuelCosts(gdx)
```

```
reportCarbonSequestration
```

Read in GDX and calculate carbon sequestred, used in convGDX2MIF.R for the reporting

Description

Read in carbon sequestred data from GDX file, information used in convGDX2MIF.R for the reporting

Usage

```
reportCarbonSequestration(gdx)
```

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx

Value

MAGPIE object - contains the capacity variables

Author(s)

Sebastian Osorio, Renato Rodrigues

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportCarbonSequestration(gdx)
```

reportCO2Price	<i>Read in GDX and calculate CO2 prices, used in convGDX2MIF.R for the reporting</i>
----------------	--

Description

Read in exogenous co2 prices and marginal values from GDX file, information used in convGDX2MIF.R for the reporting

Usage

```
reportCO2Price(gdx)
```

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx

Value

MAgPIE object - contains the capacity variables

Author(s)

Sebastian Osorio, Renato Rodrigues

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportCO2Price(gdx)
```

reportCurtailment	<i>Read in GDX and calculate electricity curtailment, used in convGDX2MIF.R for the reporting</i>
-------------------	---

Description

Read in electricity curtailment data from GDX file, information used in convGDX2MIF.R for the reporting

Usage

```
reportCurtailment(gdx)
```

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx

Value

MAGPIE object - contains the curtailment

Author(s)

Sebastian Osorio

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportCurtailment(gdx)
```

reportDemand	<i>Read in GDX and calculate (net and gross) annual demand, used in convGDX2MIF.R for the reporting</i>
--------------	---

Description

Read in (net and gross) demand data from GDX file, information used in convGDX2MIF.R for the reporting

Usage

```
reportDemand(gdx, output = NULL, reporting_tau = FALSE)
```

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx

output a magpie object containing all needed variables generated by other report*.R functions

reporting_tau boolean determining whether to generate the tau reports reporting at the time slice level (TRUE) or at the yearly level (FALSE, default)

Value

MAGPIE object - contains the capacity variables

Author(s)

Sebastian Osorio, Renato Rodrigues

See Also

[convGDX2MIF](#)

Examples

```
## Not run:  
reportDemand(gdx, output = NULL)  
  
## End(Not run)
```

reportDisinvestments *Read in GDX and calculate Disinvestment, used in convGDX2MIF.R for the reporting*

Description

Read in Disinvestment from GDX file, information used in convGDX2MIF.R for the reporting

Usage

```
reportDisinvestments(gdx)
```

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx

Value

MAGPIE object - contains the capacity variables

Author(s)

Sebastian Osorio

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportCapacityAdditions(gdx)
```

reportElectricalEfficiency

Read in GDX and report the electrical efficiency, used in convGDX2MIF.R for the reporting

Description

Read in electrical efficiency information from GDX file, information used in convGDX2MIF.R for the reporting

Usage

```
reportElectricalEfficiency(gdx)
```

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx

Value

MAGPIE object - contains the electrical efficiency

Author(s)

Sebastian Osorio, Renato Rodrigues

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportElectricalEfficiency(gdx)
```

reportElectricityPrices

Read in GDX and calculate electricity prices, used in convGDX2MIF.R for the reporting

Description

Read in electricity prices information from GDX file, information used in convGDX2MIF.R for the reporting

Usage

```
reportElectricityPrices(gdx, reporting_tau = FALSE)
```

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx
reporting_tau boolean determining whether to generate the tau report

Value

MAGPIE object - contains the capacity variables

Author(s)

Sebastian Osorio, Renato Rodrigues

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportElectricityPrices(gdx)
```

reportEmissions	<i>Read in GDX and calculate emissions, used in convGDX2MIF.R for the reporting</i>
-----------------	---

Description

Read in emissions data from GDX file, information used in convGDX2MIF.R for the reporting

Usage

```
reportEmissions(gdx, output = NULL)
```

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx
output a magpie object containing all needed variables generated by other report*.R functions

Value

MAGPIE object - contains the emission variables

Author(s)

Sebastian Osorio, Renato Rodrigues

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportEmissions(gdx)
```

reportEUETSvars	<i>Read in GDX and calculate emissions, used in convGDX2MIF.R for the reporting</i>
-----------------	---

Description

Read in data that only exists at EU ETS level, information used in convGDX2MIF.R for the reporting

Usage

```
reportEUETSvars(gdx, output = NULL)
```

Arguments

gdx	a GDX object as created by readGDX, or the path to a gdx
output	a magpie object containing all needed variables generated by other report*.R functions

Value

MAGPIE object - contains the emission variables

Author(s)

Sebastian Osorio, Renato Rodrigues

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportEUETSvars(gdx)
```

reportExchange	<i>Read in GDX and calculate electricity exchange, value of exchange and aggregated transmission capacities, used in convGDX2MIF.R for the reporting</i>
----------------	--

Description

Read in electricity exchange data from GDX file, information used in convGDX2MIF.R for the reporting

Usage

```
reportExchange(gdx)
```

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx

Value

MAGPIE object - contains the capacity variables

Author(s)

Sebastian Osorio, Renato Rodrigues

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportExchange(gdx)
```

reportFictitiousVars	<i>Read in GDX and calculate emissions, used in convGDX2MIF.R for the reporting</i>
----------------------	---

Description

Create fictitious variables to ensure symmetry of the magpie object, information used in convGDX2MIF.R for the reporting

Usage

```
reportFictitiousVars(gdx, output = NULL)
```

Arguments

gdx a GDX object as created by readGDX, or the path to a.gdx
 output a magpie object containing all needed variables generated by other report*.R
 functions

Value

MAGPIE object - contains the emission variables

Author(s)

Sebastian Osorio, Renato Rodrigues

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportFictitiousVars(gdx)
```

reportFuelCosts	<i>Read in GDX and report fuel costs, used in convGDX2MIF.R for the reporting</i>
-----------------	---

Description

Read in fuel costs information from GDX file, information used in convGDX2MIF.R for the reporting

Usage

```
reportFuelCosts(gdx)
```

Arguments

gdx a GDX object as created by readGDX, or the path to a.gdx

Value

MAGPIE object - contains the fuel costs

Author(s)

Sebastian Osorio, Renato Rodrigues

See Also[convGDX2MIF](#)**Examples**

```
## Not run: reportFuelCosts(gdx)
```

reportGeneration	<i>Read in GDX and calculate electricity generation, used in convGDX2MIF.R for the reporting</i>
------------------	--

Description

Read in electricity generation data from GDX file, information used in convGDX2MIF.R for the reporting

Usage

```
reportGeneration(gdx, output = NULL, reporting_tau = FALSE)
```

Arguments

gdx	a GDX object as created by readGDX, or the path to a gdx
output	a magpie object containing all needed variables generated by other report*.R functions
reporting_tau	boolean determining whether to generate the tau report reporting at the time slice level (TRUE) or at the yearly level (FALSE, default)

Value

MAGPIE object - contains the Generation variables

Author(s)

Sebastian Osorio, Renato Rodrigues, Antoine Levesque

See Also[convGDX2MIF](#)**Examples**

```
## Not run:
reportGeneration(gdx)

## End(Not run)
```

reportHourAvFactor *Read in GDX and report the max availability factor per hour (for non-RES), used in convGDX2MIF.R for the reporting*

Description

Read in max availability factors per hour (for nonRES) information from GDX file, information used in convGDX2MIF.R for the reporting

Usage

reportHourAvFactor(gdx)

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx

Value

MAgPIE object - contains the max availability factors per hour (for nonRES)

Author(s)

Sebastian Osorio, Renato Rodrigues

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportHourAvFactor(gdx)
```

reportIndustryEmissions *Read in GDX and calculate industry emissions, used in convGDX2MIF.R for the reporting*

Description

Read in emissions data from GDX file, information used in convGDX2MIF.R for the reporting

Usage

reportIndustryEmissions(gdx, output = NULL)

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx
output a magpie object containing all needed variables generated by other report*.R
 functions

Value

MAgPIE object - contains the emission variables

Author(s)

Sebastian Osorio

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportIndustryEmissions(gdx,output=NULL)
```

reportIndustryModule *Read in GDX and calculate industry emissions, used in convGDX2MIF.R for the reporting*

Description

Read in emissions data from GDX file, information used in convGDX2MIF.R for the reporting

Usage

```
reportIndustryModule(gdx)
```

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx

Value

MAgPIE object - contains the emission variables

Author(s)

Sebastian Osorio

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportIndustryModule(gdx)
```

reportInput	<i>Read in GDX and calculate availability factors, used in convGDX2MIF.R for the reporting</i>
-------------	--

Description

Read in availability factors information from GDX file, information used in convGDX2MIF.R for the reporting

Usage

```
reportInput(gdx, mappingPath = NULL)
```

Arguments

gdx	a GDX object as created by readGDX, or the path to a gdx
mappingPath	path to mapping file

Value

MAgPIE object - contains the availability factors

Author(s)

Sebastian Osorio, Renato Rodrigues

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportInput(gdx)
```

reportInvestmentCosts *Read in GDX and report the investment costs, used in convGDX2MIF.R for the reporting*

Description

Read in investment costs information from GDX file, information used in convGDX2MIF.R for the reporting

Usage

reportInvestmentCosts(gdx)

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx

Value

MAgPIE object - contains the investment costs

Author(s)

Sebastian Osorio, Renato Rodrigues

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportInvestmentCosts(gdx)
```

reportLifetime *Read in GDX and report the plant lifetime, used in convGDX2MIF.R for the reporting*

Description

Read in lifetime information from GDX file, information used in convGDX2MIF.R for the reporting

Usage

reportLifetime(gdx)

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx

Value

MAGPIE object - contains the lifetimes

Author(s)

Sebastian Osorio, Renato Rodrigues

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportLifetime(gdx)
```

reportLoadFactor	<i>Read in GDX and calculate the load factor, used in convGDX2MIF.R for the reporting</i>
------------------	---

Description

Read in electricity generation data from GDX file, information used in convGDX2MIF.R for the reporting

Usage

```
reportLoadFactor(gdx, output = NULL, reporting_tau = FALSE)
```

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx

output a magpie object containing all needed variables generated by other report*.R functions

reporting_tau boolean determining whether to generate the tau report

Value

MAGPIE object - contains the capacity variables

Author(s)

Sebastian Osorio

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportLoadFactor(gdx)
```

reportMSR	<i>Read in GDX and calculate MSR-related variables, used in convGDX2MIF.R for the reporting</i>
-----------	---

Description

Read in emissions data from GDX file, information used in convGDX2MIF.R for the reporting

Usage

```
reportMSR(gdx)
```

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx

Value

MAGPIE object - contains the emission variables

Author(s)

Sebastian Osorio

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportEmissions(gdx)
```

reportNuren	<i>Read in GDX and calculate availability factors, used in convGDX2MIF.R for the reporting</i>
-------------	--

Description

Read in availability factors information from GDX file, information used in convGDX2MIF.R for the reporting

Usage

```
reportNuren(gdx)
```

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx

Value

MAgPIE object - contains the availability factors

Author(s)

Sebastian Osorio, Renato Rodrigues

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportNuren(gdx)
```

reportOMF	<i>Read in GDX and report the Fixed O&M costs, used in convGDX2MIF.R for the reporting</i>
-----------	--

Description

Read in Fixed O&M costs information from GDX file, information used in convGDX2MIF.R for the reporting

Usage

```
reportOMF(gdx)
```


Arguments

gdx a GDX object as created by readGDX, or the path to a gdx

Value

MAGPIE object - contains the Fixed O&M costs

Author(s)

Sebastian Osorio, Renato Rodrigues

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportOMF(gdx)
```

reportOMV	<i>Read in GDX and report the Variable O&M costs, used in convGDX2MIF.R for the reporting</i>
-----------	---

Description

Read in Variable O&M information from GDX file, information used in convGDX2MIF.R for the reporting

Usage

```
reportOMV(gdx)
```

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx

Value

MAGPIE object - contains the Variable O&M

Author(s)

Sebastian Osorio, Renato Rodrigues

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportOMV(gdx)
```

reportPeakDemand	<i>Read in GDX and calculate annual peak demand, used in convGDX2MIF.R for the reporting</i>
------------------	--

Description

Read in gross demand data from GDX file, information used in convGDX2MIF.R for the reporting

Usage

```
reportPeakDemand(gdx)
```

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx

Value

MAgPIE object - contains the capacity variables

Author(s)

Sebastian Osorio, Renato Rodrigues

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportPeakDemand(gdx)
```

reportPrimaryEnergy *Read in GDX and calculate primary energy, used in convGDX2MIF.R for the reporting*

Description

Read in primary energy data from GDX file, information used in convGDX2MIF.R for the reporting

Usage

```
reportPrimaryEnergy(gdx)
```

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx

Value

MAGPIE object - contains the capacity variables

Author(s)

Sebastian Osorio, Renato Rodrigues

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportPrimaryEnergy(gdx)
```

reportTotalSystemCosts *Read in GDX and calculate electricity generation, used in convGDX2MIF.R for the reporting*

Description

Read in electricity generation data from GDX file, information used in convGDX2MIF.R for the reporting

Usage

```
reportTotalSystemCosts(gdx, output = NULL)
```

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx
 output a magpie object containing all needed variables generated by other report*.R
 functions

Value

MAGPIE object - contains the Generation variables

Author(s)

Sebastian Osorio, Renato Rodrigues

See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportTotalSystemCosts(gdx)
```

reportUKETSvars	<i>Read in GDX and calculate emissions, used in convGDX2MIF.R for the reporting</i>
-----------------	---

Description

Read in data that only exists at EU ETS level, information used in convGDX2MIF.R for the reporting

Usage

```
reportUKETSvars(gdx, output = NULL)
```

Arguments

gdx a GDX object as created by readGDX, or the path to a gdx
 output a magpie object containing all needed variables generated by other report*.R
 functions

Value

MAGPIE object - contains the emission variables

Author(s)

Sebastian Osorio

reportUKETSvars

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See Also

[convGDX2MIF](#)

Examples

```
## Not run: reportUKETSvars(gdx)
```

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