

R-tools

Ran at 2015-05-17 08:14:15

```
> wiki_username <- "Jouni"
> ### This code was run from page [[Energy balance in Suzhou#Answer]]
> library(OpasnetUtils)
> library(ggplot2)
> N <- 10 # Number of iterations
> objects.latest("Op_en5141", code_name = "initiate")
> balance <- Ovariable("balance", ddata = "Op_en5816.equations")
> nonlinearity <- Ovariable("nonlinearity", ddata = "Op_en5141", subset = "No nonlinearities")
> directinput <- Ovariable("directinput", ddata = "Op_en5141", subset = "No modelled upstream variables")
> energy.balance <- EvalOutput(energy.balance)
> oprint(summary(energy.balance))
```

	Year	energybalanceVars	mean
1	2010	Boughtelectricity	1593.64
2	2020	Boughtelectricity	552.36
3	2010	ConsAgrielectricity	25.85
4	2020	ConsAgrielectricity	29.72
5	2010	ConsCommerceelectricity	684.71
6	2020	ConsCommerceelectricity	787.41
7	2010	ConsCommerceheat	1.73
8	2020	ConsCommerceheat	1.99
9	2010	ConsHouseholdselectricity	625.38
10	2020	ConsHouseholdselectricity	719.19
11	2010	ConsIndelectricity	7032.04
12	2020	ConsIndelectricity	9844.86
13	2010	ConsIndheat	2981.31
14	2020	ConsIndheat	4173.84
15	2010	ConsTransportationelectricity	49.87
16	2020	ConsTransportationelectricity	89.76
17	2010	CPcoalproducts	4.44
18	2020	CPcoalproducts	6.21
19	2010	CPloss	0.70
20	2020	CPloss	0.98
21	2010	CPnaturalgas	0.00
22	2020	CPnaturalgas	0.00
23	2010	CPoilproducts	0.02
24	2020	CPoilproducts	0.02
25	2010	CPrawcoal	5.11
26	2020	CPrawcoal	7.17
27	2010	Hcoalproducts	360.28
28	2020	Hcoalproducts	504.30
29	2010	Hheat	3074.74
30	2020	Hheat	4304.21
31	2010	Hloss	690.69
32	2020	Hloss	966.92
33	2010	Hnaturalgas	88.00
34	2020	Hnaturalgas	123.24
35	2010	Hoilproducts	38.60
36	2020	Hoilproducts	53.98
37	2010	Hotherenergy	27.20
38	2020	Hotherenergy	38.03
39	2010	Hrawcoal	3251.35
40	2020	Hrawcoal	4551.58
41	2010	Losselectricity	636.20
42	2020	Losselectricity	1018.00
43	2010	Lossheat	91.70
44	2020	Lossheat	128.38
45	2010	Lossnaturalgas	31.90
46	2020	Lossnaturalgas	51.10

47	2010	Lossoilproducts	20.40
48	2020	Lossoilproducts	28.53
49	2010	TPcoalproducts	1145.50
50	2020	TPcoalproducts	1832.76
51	2010	TPelectricity	7460.40
52	2020	TPelectricity	11936.59
53	2010	TPheat	54.70
54	2020	TPheat	87.55
55	2010	TPloss	11824.10
56	2020	TPloss	18918.53
57	2010	TPnaturalgas	670.90
58	2020	TPnaturalgas	1073.40
59	2010	TPoilproducts	21.40
60	2020	TPoilproducts	34.23
61	2010	TPotherenergy	198.00
62	2020	TPotherenergy	316.73
63	2010	TPrawcoal	17194.00
64	2020	TPrawcoal	27510.45

```
> ggplot(energy.balance@output, aes_string(x = "energybalanceVars", y = "energy.balanceResult")) +
+ geom_boxplot() +
+ facet_wrap(~Year, ncol = 1) +
+ theme_grey(base_size = 24) +
+ theme(axis.text.x = element_text(angle = 90, hjust = 1, vjust = 0.2))
```

