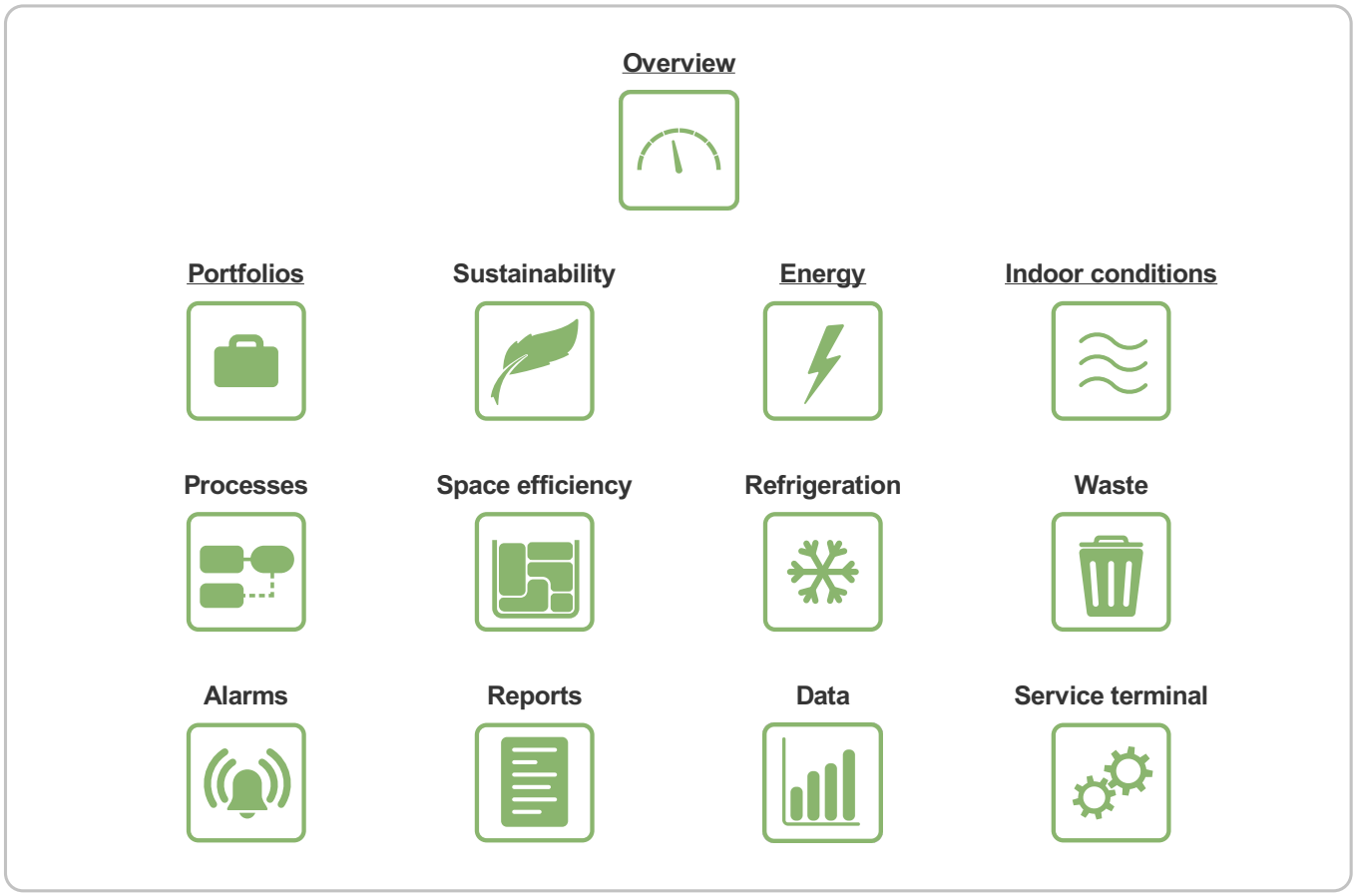
Table of Contents

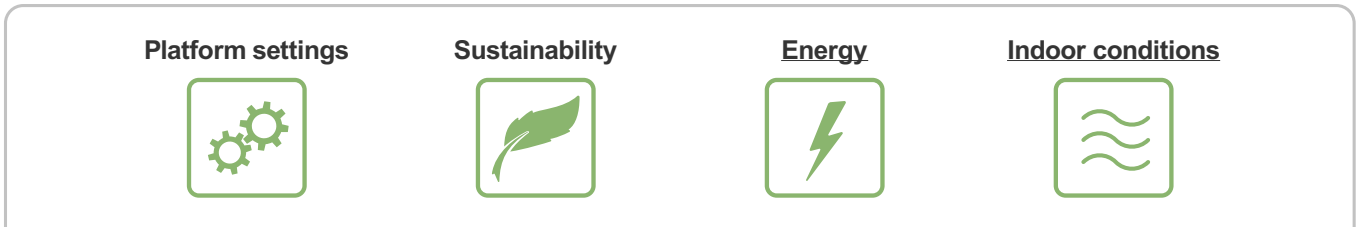
Introduction to Portal Webhelp

Welcome to the Portal Webhelp.
Here you can find all the necessary information on how to use the Portal.

Navigation



Admin



Processes

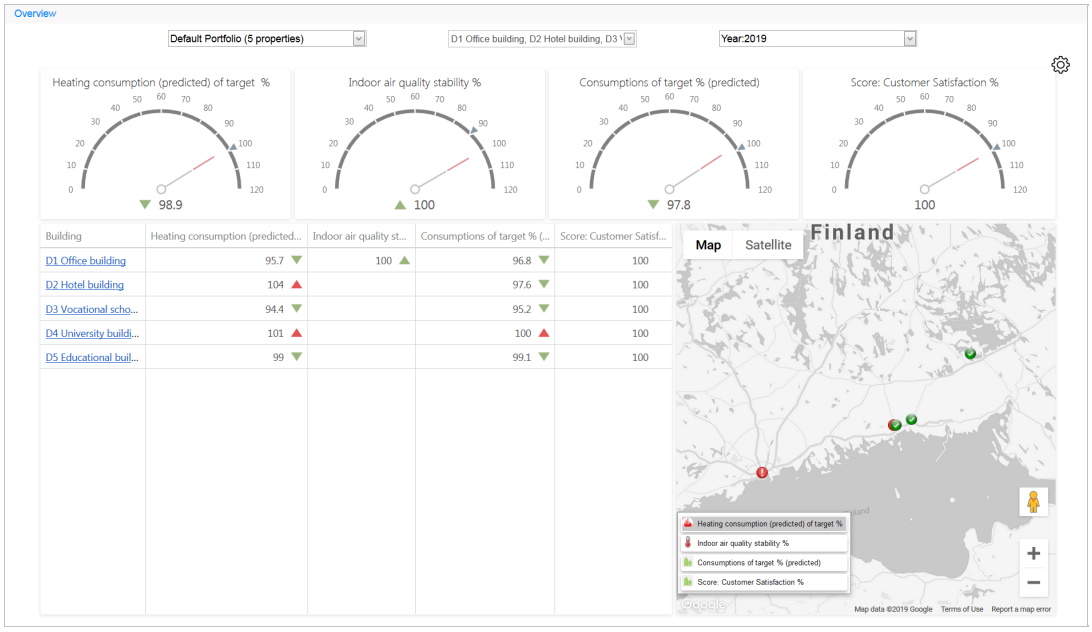
Space efficiency

Refrigeration

Overview

The Overview shows at a glance what is going on with the buildings and whether targets are being met. On the pages, you can see whether the KPIs and targets of portfolios and buildings are being met as desired. There is a map view, which makes it easy to spot buildings where targets are not being met, for example.

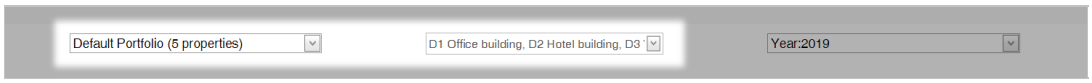
The purpose of the overview is to provide information about buildings at a glance. You can adjust the page layout and contents based on what you need.



Selection of data

Selecting the building

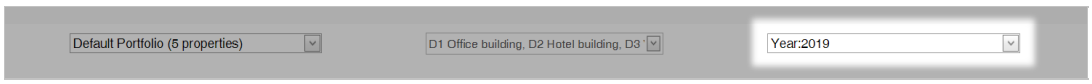
Select the portfolio and building in the drop-down menus at the top of the page.



Note

Select all lets you select all the buildings in the portfolio.

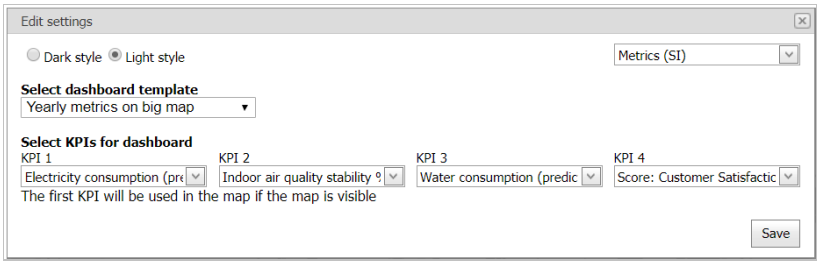
Selecting the year



Select the year whose data you want to view in the drop-down menu at the top of the page.

Overview settings

You can edit overview settings in a pop-up window that opens at the gear symbol (⚙).



Settings

Page style

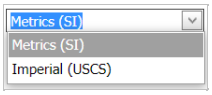
Page style defines Portal style.

Select the style by selecting *Dark style* or *Light style*.

Unit system

Unit system defines the default system of units used in the Portal.

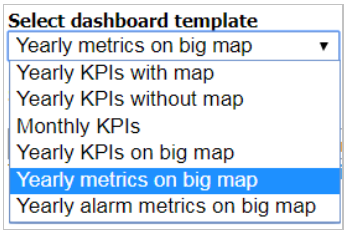
You can select the system of units used in a drop-down menu.



Overview template

Overview template defines the template on which the selected data is displayed. There are several template options, which are presented in section Overview templates in this guide.

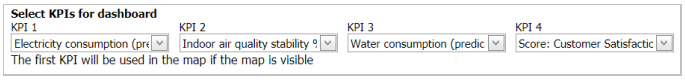
You can select the overview template used in a drop-down menu.



KPIs shown in the overview

You can select four important KPIs with values you want to view for the overview. If you have selected a template with map view, the selected KPIs will show in the map view.

You can select the KPIs in the drop-down menus.



Note

KPI1 shows in the map view by default.

Saving the settings

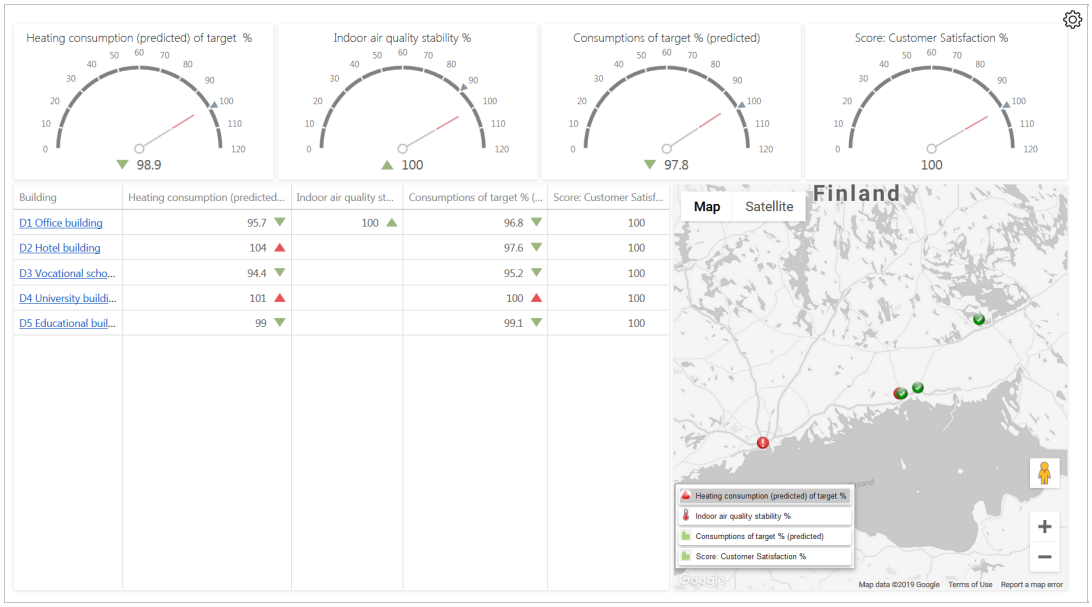
Remember to save the changes to overview settings by selecting the *Save* button. The Portal remembers the changes made, so the next time you use the overview, your saved settings will be used.

Save

Overview templates

Yearly KPIs with map

The *Yearly KPIs with map* template allows you to view the four KPIs selected on a yearly basis.



Each KPI is shown as a separate indicator at the top of the page. The KPI displayed by each indicator is for all of the buildings selected.

The table under the indicators shows building-specific KPIs for each building selected.

The map view shows the status of the buildings selected in terms of the KPI selected. Use of the map view is described in section Map in this guide.

Yearly KPIs without map

The *Yearly KPIs without map* template allows you to view the four KPIs selected on a yearly basis.

Each KPI is shown as a separate indicator at the top of the page. The KPI displayed by each indicator is for all of the buildings selected.

The table under the indicators shows building-specific KPIs for each building selected.

Monthly KPIs

The *Monthly KPIs* template allows you to view the four KPIs selected on a monthly basis.

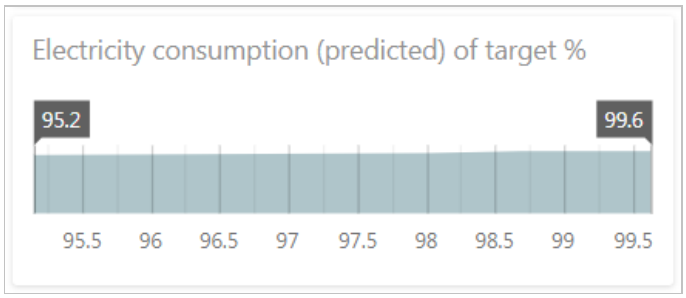
Each KPI is shown as a separate indicator at the top of the page. The KPI displayed by each indicator is for all of the buildings selected.

The KPI-specific graphs under the indicators make it possible to compare the KPIs with the targets set.

Yearly KPIs on big map

With the *Yearly KPIs on big map* template, you can specify the buildings shown on the map in regard to yearly KPIs.

You can use the selectors at the top of the page to specify a minimum and maximum value for one or more KPIs, and the buildings within that range are shown on the map.



Note

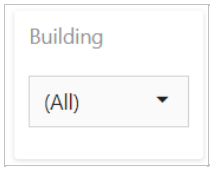
You can change the selector's minimum and maximum value by dragging the selector to the desired value.

Use of the map component is described in section Map in this guide.

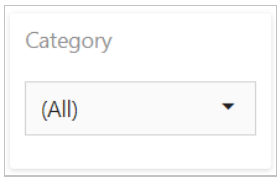
Yearly metrics on big map

With the *Yearly metrics on big map* template, you can view the desired metric on a yearly basis in map view.

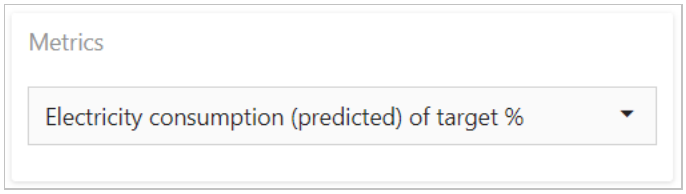
You can select one or more buildings to show on the map. Select the buildings in the *Building* drop-down menu.



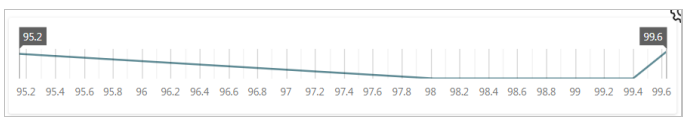
You can limit the metrics available for selection by selecting the desired category in the *Category* drop-down menu.



Select the metric to be viewed in the *Metrics* drop-down menu.



You can use the selector at the top of the page to specify a minimum and maximum value for the metric selected, and the buildings within that range are shown on the map. You can change the selector's minimum and maximum value by dragging the selector to the desired value.

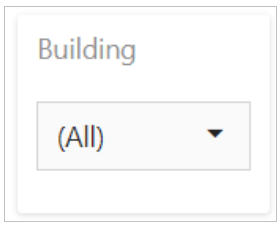


Yearly alarm metrics on big map

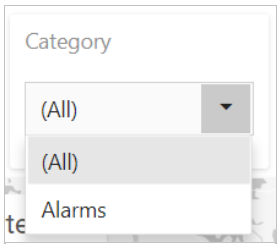
With the *Yearly alarm metrics on big map* template, you can view the desired metric in the alarm category on a yearly basis

in map view.

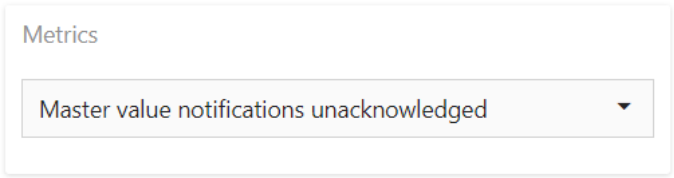
You can select one or more buildings to show on the map. Select the buildings in the *Building* drop-down menu.



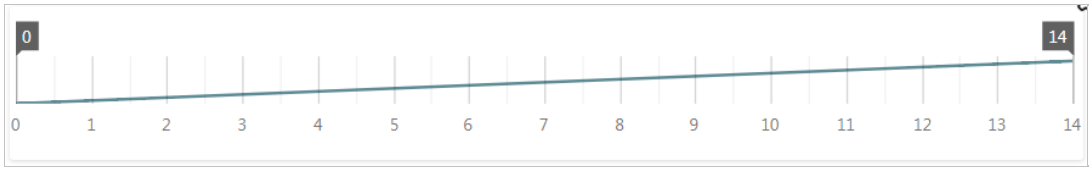
Select *Alarms* as the report category.



Select the alarm to be viewed in the *Metrics* drop-down menu.

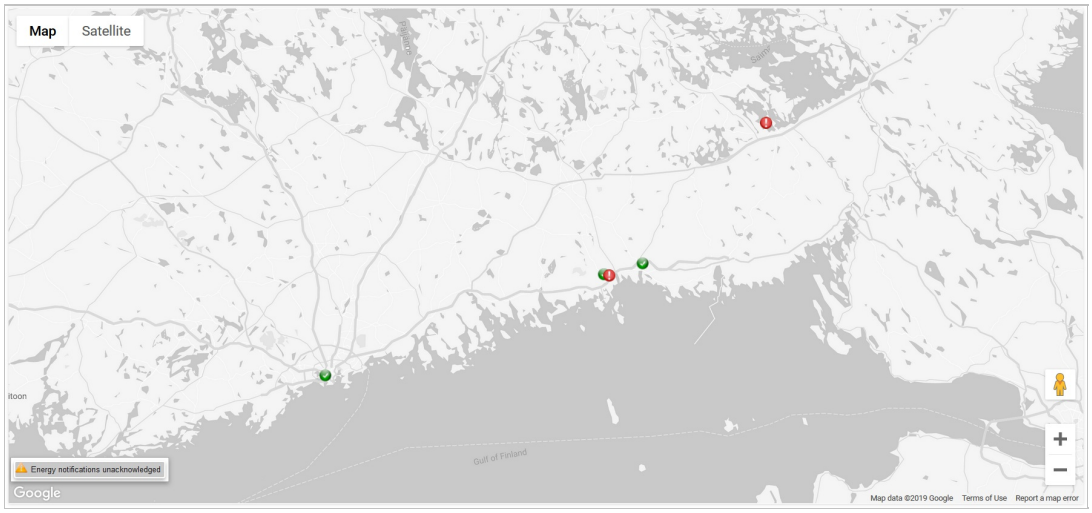


You can use the selector at the top of the page to specify a minimum and maximum value for the metric selected, and the buildings within that range are shown on the map. You can change the selector's minimum and maximum value by dragging the selector to the desired value.



Map

You can see on the map how the buildings are doing in terms of the KPIs and metrics selected. The Portal uses *Google Maps*, which includes functions for selecting different views and zooming the map.

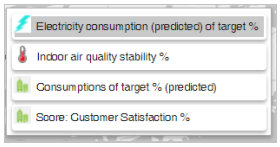


The buildings selected for the report show on the map marked with different icons depending on their status in regard to the KPI or metric selected. Click on an icon to see the specific value.

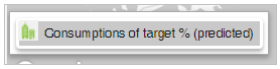
Icon key

Icon	Meaning
	On target
	Target exceeded
	Data not available

You can select the KPI you want to view from the bottom left corner. The default KPI is KPI1 as specified in settings. You can change the four options shown on the map by changing the page settings.



In templates on metrics, the bottom left corner shows the metric selected instead of KPIs.



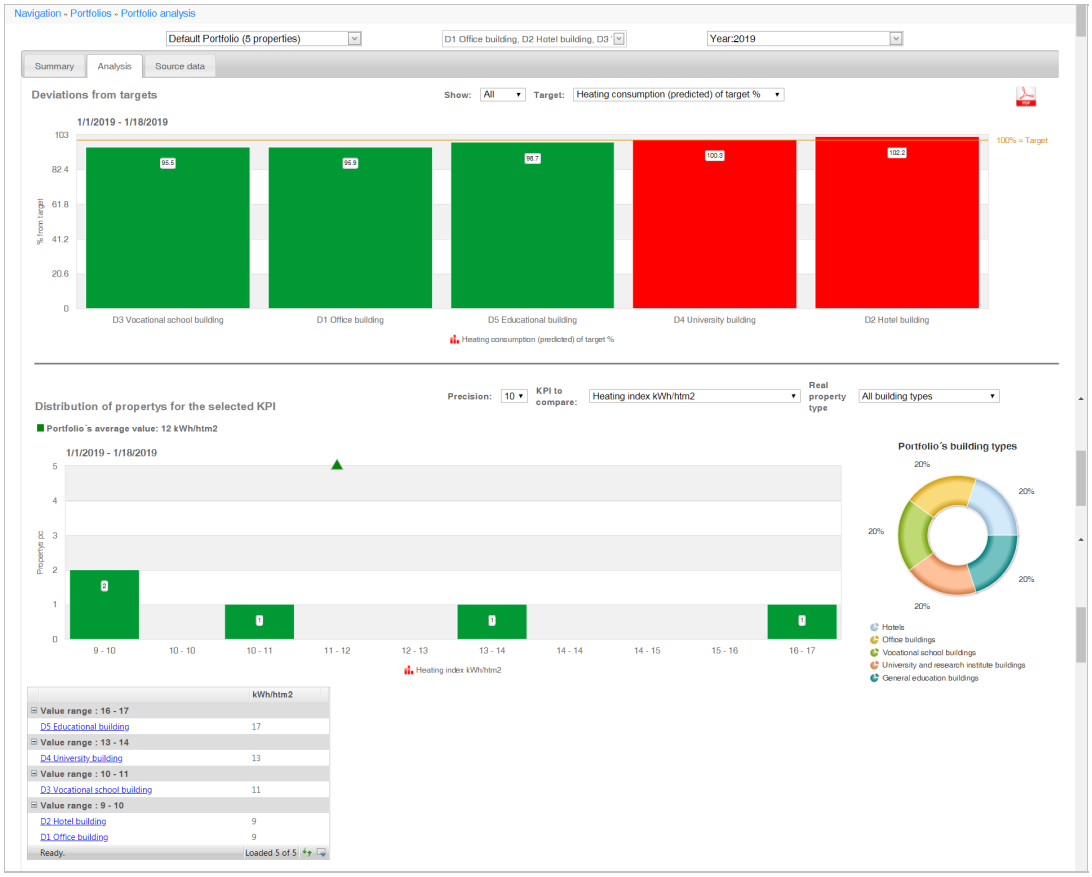
Portfolios

Portfolio analysis

Portfolio source data

Portfolio analysis

On the *Portfolio analysis* page, you can monitor how the portfolio targets are met and see in which properties meet the targets best and which have room for improvement. The distribution of the properties in the portfolio can also be studied based on the different KPI.



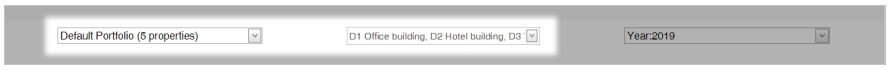
The page is divided into two parts.

- Deviations from targets
- Distribution of properties for the selected KPI

Selecting information

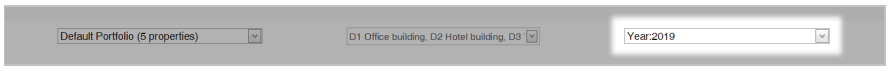
Selecting the building

Select the desired portfolio and building from the drop-down menus at the top of the page.



Selecting the year

The portfolio analysis is presented by year. Select the desired year from the *Year* drop-down menu.

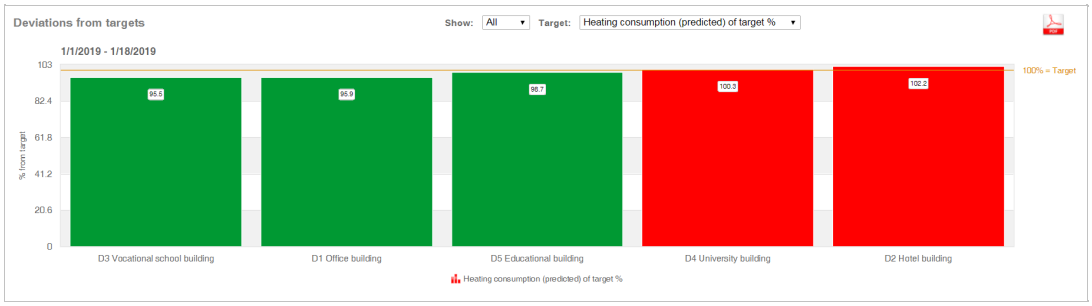


Downloading a report

The Portfolio analysis report for the selected year and building can be downloaded as a PDF file by clicking the *Download PDF-file* button ( ) in the top right corner of the page.

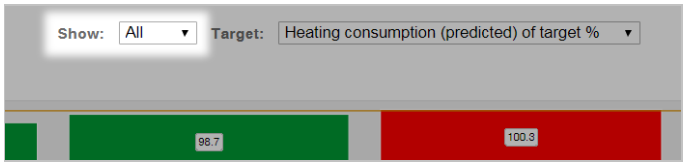
Deviations from targets

The *Deviations from targets* graph shows the KPI data of the selected properties compared to the target.



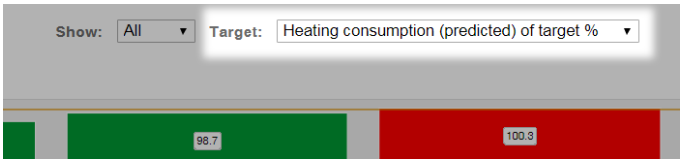
Limiting the number of properties to be shown

Limit the number of properties to be viewed by selecting the desired number of properties from the *Show* drop-down menu. This places the KPI information on the buildings on the graph in order from worst to best.



Selecting the target KPI

Select the consumption KPI, the realization of which you want to monitor from the *Target* drop-down menu.



Viewing the graph

The deviation of the properties compared to the selected target is presented as a bar graph. The graph shows how much the different properties differ from the target and which properties meet the targets best.

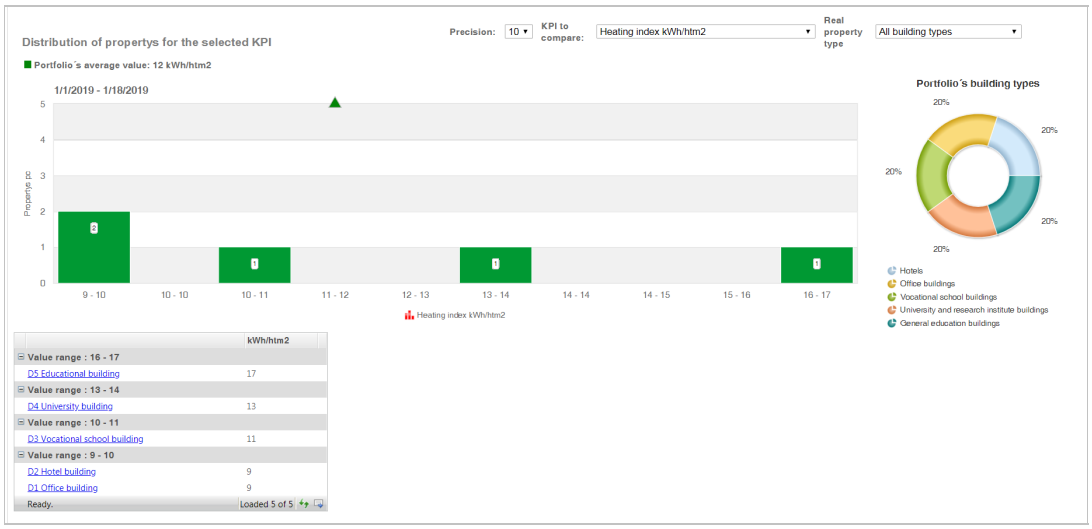
Note

The target is always 100% and the realized values are compared to it.

The properties are drawn in the graph in the order from worst to best, so that the building that reached the target best is on the right. The green and red color indicate whether the target was reached or whether the target was exceeded.

Distribution of properties for the selected KPI

The graph *Distribution of properties for the selected KPI* shows the number of properties within the KPI limit values.



Selecting the precision

Select the precision you want to use to review the properties.

Note

The precision specifies the number of points on the X-axis.

Selecting the KPI

From the *KPI to compare* drop-down menu, select the KPI you want to study concerning the properties.

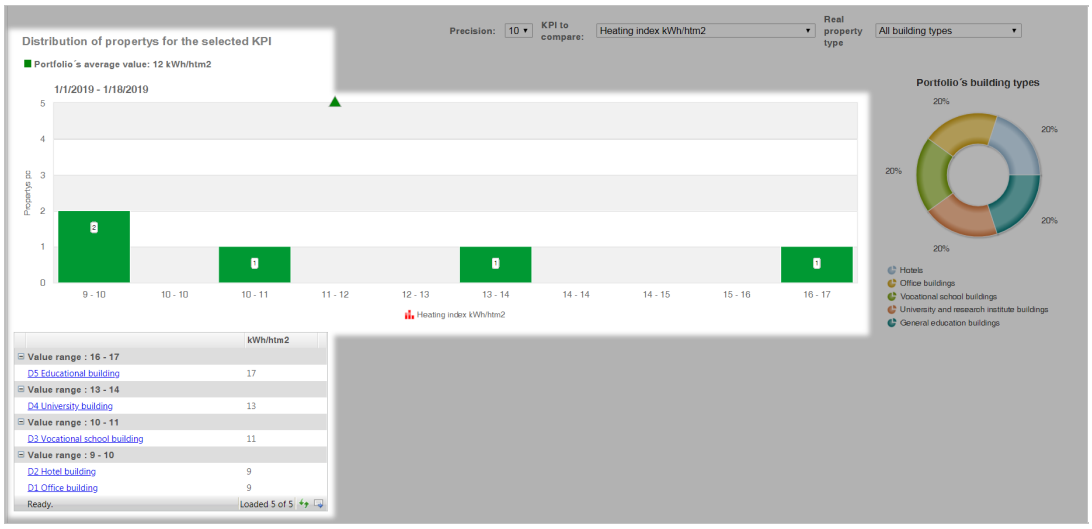
Selecting the real building type

Select the type of building to be reviewed from the *Real building type* drop-down menu.

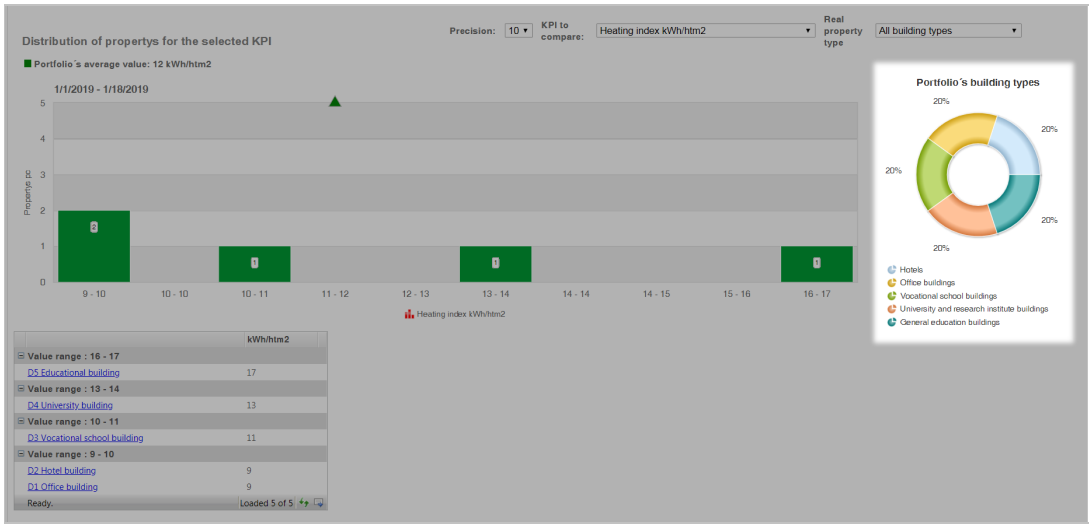
Viewing the graph

The distribution of properties in relation to the KPI selected is presented as a bar graph. The graph shows the number of properties found in a certain interval and the portfolio average for the selected KPI.

The exact KPI values by building are shown in the table below the graph.



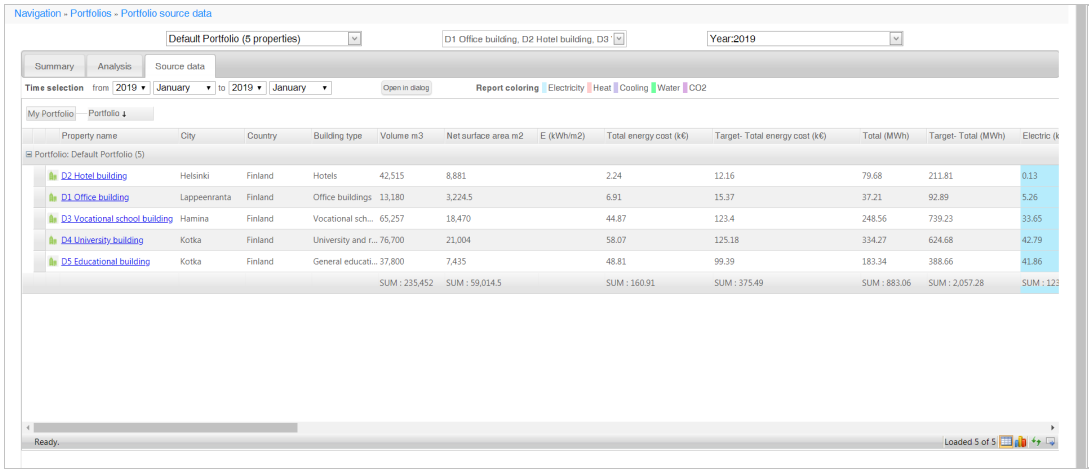
The portfolio's distribution of properties shows the number of building types. You can highlight a specific building type by clicking its name.



Portfolio source data

In the *Portfolio source data* page, the building data has been collected by portfolio. On the page, it is easy to see if data on a certain building is missing.

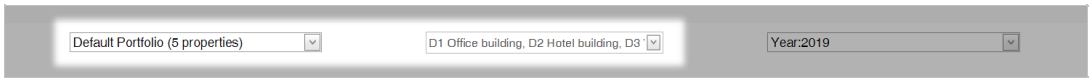
The building data are shown in a table, in which different colors are used to indicate data related to different energy types as well as the CO2 emissions. The data for both an individual building as well as the whole portfolio are shown. The data for portfolios and properties can be viewed by scrolling the scrollbar below the table.



Selecting information

Selecting properties

Select the desired portfolio and building from the drop-down menus at the top of the page.

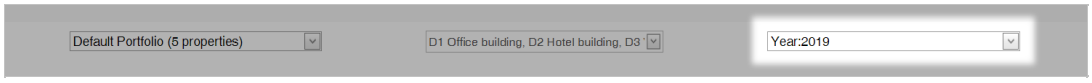


Note

The *Select all* option can be used to select all properties in the portfolio.

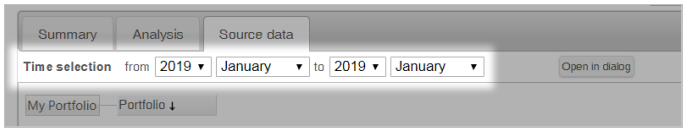
Selecting the year

Select the year, the data of which you want to view, from the drop-down menu at the top of the page.



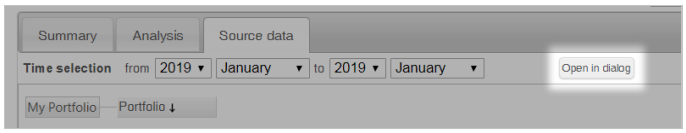
Time selection

The *Time selection* allows you to specify the timespan by selecting the start and end time with the accuracy of a month.



Open in dialog

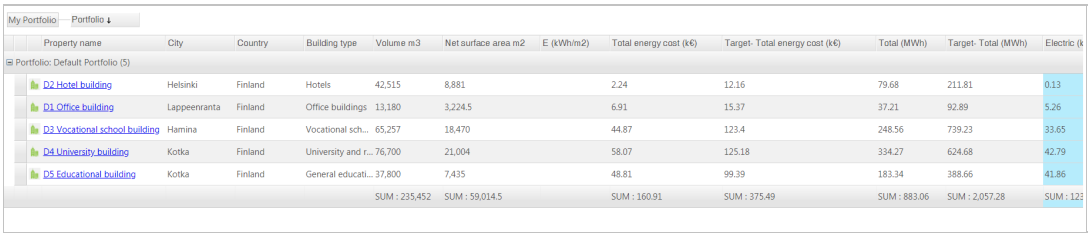
With the *Open in dialog* button you can display the information in the table in a new tab.



Viewing the data

General information on the properties

General information on the properties is shown on a gray background. In addition, the total consumption and costs of the building as well as the corresponding targets are shown in the table.



Property name	City	Country	Building type	Volume m3	Net surface area m2	E (kWh/m2)	Total energy cost (k€)	Target- Total energy cost (k€)	Total (MWh)	Target- Total (MWh)	Electric (k
Portfolio: Default Portfolio (5)											
D2 Hotel building	Helsinki	Finland	Hotels	42,515	8,881		2.24	12.16	79.68	211.81	0.13
D1 Office building	Lappeenranta	Finland	Office buildings	13,180	3,224.5		6.91	15.37	37.21	92.89	5.26
D3 Vocational school building	Hamina	Finland	Vocational sch...	65,257	18,470		44.87	123.4	248.56	739.23	33.65
D4 University building	Kotka	Finland	University and r...	76,700	21,004		58.07	125.18	334.27	624.68	42.79
D5 Educational building	Kotka	Finland	General educati...	37,800	7,435		48.81	99.39	183.34	388.66	41.86
				SUM : 235,452	SUM : 59,014.5		SUM : 160.91	SUM : 375.49	SUM : 883.06	SUM : 2,057.28	SUM : 123

Note

You can get to the Energy reports page by pressing the name of a building.

Electricity

Electric (k€)	Target- Electricity (k€)	Electric (MWh)	Target- Electricity (MWh)	Electric kWh/r-m3	Electricity kWh/htm2	Electric supplier	Electric average price (€/MWh)
0.13	7.86	1.6	97.91	0.04	0.18		78.53
5.26	10.48	7.35	14.21	0.56	2.28	Oulun sähkömyynti	716.46
33.65	88.99	46.96	127.81	0.72	2.54	Oulun sähkömyynti	716.46
42.79	97.86	59.72	140.59	0.78	2.84	Oulun sähkömyynti	716.46
41.86	84.1	58.43	120.76	1.55	7.86	Oulun sähkömyynti	716.46
SUM : 123.69	SUM : 289.28	SUM : 174.06	SUM : 501.29	AVG : 0.73	AVG : 3.14		AVG : 588.87

Heat

Heat (k€)	Target- Heat (k€)	Heat (MWh)	Heat norm. (MWh)	Target- Heat (MWh)	Net surface area m2	Heat kWh/htm2	Heat supplier	Heat average price (€/MWh)
2.12	4.3	78.08	78.08	113.9	1.84	8.79	HELEN	27.11
1.65	4.89	29.86	29.86	78.68	2.27	9.26	Lappeenrannan...	55.24
11.22	34.41	201.6	201.6	611.42	3.09	10.92	Lappeenrannan...	55.66
15.28	27.32	274.55	274.55	484.09	3.58	13.07	Lappeenrannan...	55.66
6.95	15.29	124.91	124.91	267.9	3.3	16.8	Lappeenrannan...	55.66
SUM : 37.22	SUM : 86.22	SUM : 709	SUM : 709	SUM : 1,555.99	AVG : 2.82	AVG : 11.77		AVG : 49.87

Water

Water (k€)	Water (k€)	Water (m3)	Target- Water (m3)	Water supplier	Water average price (€/m3)
	1.45		378	HELEN	
0.16	0.26	41.45	66		3.83
0.15	0.88	39.42	225		3.83
0.63	1.65	165.1	424		3.83
0.5	1.09	130.73	279		3.83
SUM : 1.44	SUM : 5.34	SUM : 376.7	SUM : 1,372		AVG : 3.06

Cooling

Cooling (MWh)	Target- Cooling (MWh)	Cooling (k€)	Target- Cooling (k€)	Cooling kWh/m3	Cooling kWh/htm2	Cooling supplier	Cooling average price (€/MWh)
						HELEN	
SUM : 0	SUM : 0	SUM : 0	SUM : 0	AVG : 0	AVG : 0		AVG : 0

CO2 emissions

CO2 emissions total (t)	Target- CO2 emissions total (t)
7.84	32
4.65	11
30.7	90
40.69	81
26.73	56
SUM : 110.61	SUM : 270

Energy

Energy reports
Energy balance
Energy trends
Energy management

Energy reports

Building's year comparison report

On the Building's year comparison report, you can see quickly how the energy consumption, CO2 emissions and the Indoor air quality and Indoor thermal conditions stability have developed during the year and compare them to the previous years.

The values of the selected year are compared with the values of the two previous years, and the results are presented with the accuracy of a month in both a graphic format and as a table. This makes it possible to see the overall situation at a glance.

Navigation » Energy » Energy reports

Selected Property: D1 Office building

D1 Office building

Summary | Energy reports | Analysis | Trends | Source data | Energy management

Building's year comparison report | Main meter report | Submeter report

Portfolio: Default Portfolio | Property: D1 Office building | Building structure: D1 Office building | Year: 2019 | Heat norm. | Units

Building's year comparison report

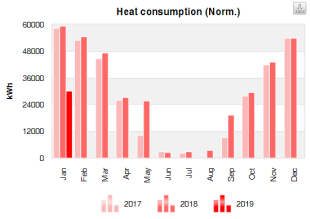
Property name: D1 Office building
Address: Koskentie 1, 53330, Lappeenranta
Property ID: 000002
Real property type: Office buildings
Users or inhabitant: 175
E-Reading (kWh/htm2): 0

Volume (m3): 13,180
Heated area (htm2): 3,225
Total surface area (brm2): 3,953
Year of construction (date): 1/1/1991
Floors: 4
Energy efficiency class:

KPI / 2018

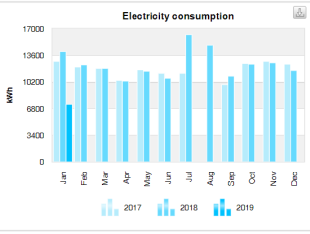
Heat:	114.1 kWh/htm2
	27.9 kWh/r-m3
Electricity:	46.4 kWh/htm2
	11.4 kWh/r-m3
Water:	0.28 m3/htm2
	0.07 m3/r-m3
CO2-emissions:	69.8 t/CO2

Heat consumption (Norm.)



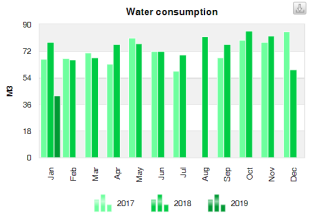
	Consumption (kWh) 2017	Cost (€) 2017	Consumption (kWh) 2018	Cost (€) 2018	Consumption (kWh) 2019	Target (kWh) 2019	Cost (€) 2019	Change (%) previous year
Jan	58,137	3,394	59,154	3,405	29,862	78,680	2,196	
Feb	53,013	3,202	54,487	3,802		45,070		
Mar	44,567	2,684	47,035	3,572		38,550		
Apr	25,849	2,240	27,205	1,953		20,890		
May	10,139	1,344	25,557	949		5,290		
Jun	2,625	837	2,530	750		4,740		
Jul	2,014	703	2,840	704		3,750		
Aug		547	3,460	738		4,700		
Sep	9,190	1,043	19,212	1,187		11,340		
Oct	27,732	2,118	29,483	2,028		30,360		
Nov	41,737	2,612	42,974	2,529		45,550		
Dec	53,803	2,913	53,951	3,402		32,550		
Total	**328,806**	**23,637**	**367,888**	**25,019**	**29,862**	**321,470**	**2,196**	

Electricity consumption



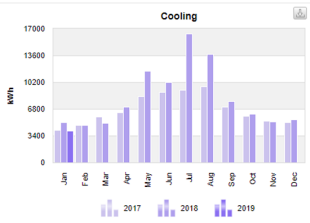
	Consumption (kWh) 2017	Cost (€) 2017	Consumption (kWh) 2018	Cost (€) 2018	Consumption (kWh) 2019	Target (kWh) 2019	Cost (€) 2019	Change (%) previous year
Jan	12,802	9,466	14,093	10,391	7,346	14,210	5,557	
Feb	12,121	8,978	12,328	9,127		14,200		
Mar	11,961	8,864	11,954	8,858		11,636		
Apr	10,401	7,746	10,343	7,705		10,273		
May	11,719	8,690	11,568	8,582		10,976		
Jun	11,268	8,367	10,673	7,941		9,738		
Jul	11,321	8,405	16,266	11,948		9,448		
Aug		294	14,866	10,945		10,663		
Sep	9,868	7,364	10,897	8,102		13,002		
Oct	12,581	9,308	12,471	9,229		13,897		
Nov	12,788	9,456	12,679	9,378		15,573		
Dec	12,424	9,195	11,607	8,610		8,368		
Total	**129,254**	**96,133**	**149,745**	**110,816**	**7,346**	**141,984**	**5,557**	

Water consumption



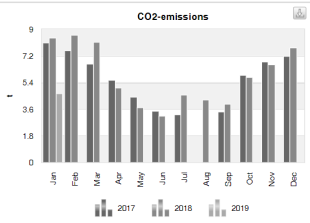
	Consumption (M3) 2017	Cost (€) 2017	Consumption (M3) 2018	Cost (€) 2018	Consumption (M3) 2019	Target (M3) 2019	Cost (€) 2019	Change (%) previous year
Jan	67	266	78	309	41	66	170	
Feb	67	266	66	264		58		
Mar	71	282	67	269		66		
Apr	63	252	77	304		59		
May	81	320	77	306		56		
Jun	72	285	72	286		54		
Jul	58	235	69	276		47		
Aug		11	82	324		59		
Sep	67	269	76	303		61		
Oct	79	314	86	338		52		
Nov	78	308	82	326		50		
Dec	85	337	59	238		48		
Total	**788**	**3,145**	**891**	**3,543**	**41**	**676**	**170**	

Cooling



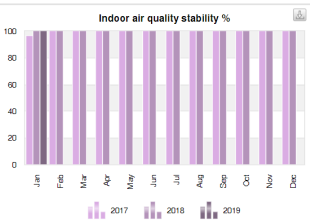
	Consumption (kWh) 2017	Cost (€) 2017	Consumption (kWh) 2018	Cost (€) 2018	Consumption (kWh) 2019	Target (kWh) 2019	Cost (€) 2019	Change (%) previous year
Jan	4,070		5,060		3,970	4,070		
Feb	4,700		4,660			4,700		
Mar	5,800		4,950			5,800		
Apr	6,290		7,020			6,290		
May	8,390		11,560			8,390		
Jun	8,860		10,190			8,860		
Jul	9,180		16,300			9,180		
Aug	9,640		13,740			9,640		
Sep	7,010		7,760			7,010		
Oct	5,850		6,150			5,850		
Nov	5,220		5,180			5,220		
Dec	5,020		5,410			5,020		
Total	**80,030**		**97,980**		**3,970**	**80,030**		

CO2-emissions



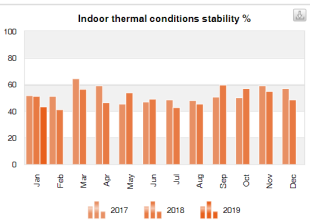
	Emissions (t) 2017	Emissions (t) 2018	Electricity portion (t) 2019	Electricity target (t) 2019	Heat portion (t) 2019	Heat target (t) 2019	Total-emissions (t) 2019	Total-target (t) 2019	Change (%) previous year
Jan	8.1	8.4	1.9	4.0	2.7	7.0	4.6	11.0	
Feb	7.6	8.6		4.0		4.0		8.0	
Mar	6.7	8.1		3.0		4.0		7.0	
Apr	5.5	5.0		3.0		2.0		5.0	
May	4.4	3.7		3.0		0.5		3.5	
Jun	3.4	3.1		3.0		0.4		3.4	
Jul	3.2	4.5		2.0				2.0	
Aug		4.2		3.0				3.0	
Sep	3.4	3.9		3.0		1.0		4.0	
Oct	5.9	5.7		4.0		3.0		7.0	
Nov	6.8	6.6		4.0		4.0		8.0	
Dec	7.2	7.8		2.0		3.0		5.0	
Total	**62**	**70**	**2**	**38**	**3**	**29**	**5**	**67**	

Indoor air quality stability %



	Indoor air quality stability % 2017	Indoor air quality stability % 2018	Indoor air quality stability % 2019
Jan	97	100	100
Feb	100	100	
Mar	100	100	
Apr	100	100	
May	100	100	
Jun	100	100	
Jul	100	100	
Aug	100	100	
Sep	100	100	
Oct	100	100	
Nov	100	100	
Dec	100	100	
Average	**100**	**100**	**100**

Indoor thermal conditions stability %

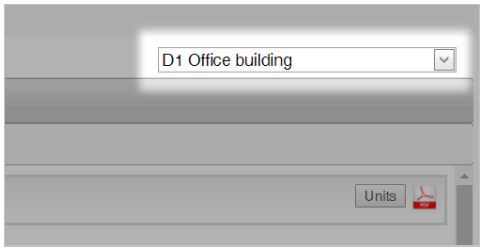


	Indoor thermal conditions stability % 2017	Indoor thermal conditions stability % 2018	Indoor thermal conditions stability % 2019
Jan	52	51	43
Feb	51	41	
Mar	64	57	
Apr	59	46	
May	45	54	
Jun	47	49	
Jul	48	43	
Aug	48	45	
Sep	51	59	
Oct	50	57	
Nov	59	55	
Dec	57	49	
Average	**53**	**51**	**43**

Information selected for the report

Selecting the building

Select the building from the drop-down menu in the top right corner of the page.

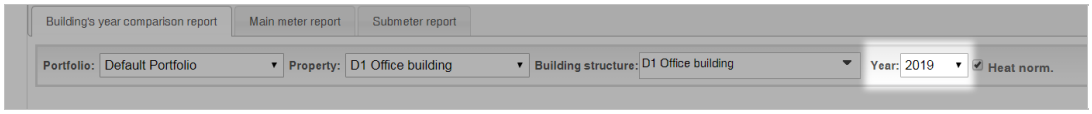


The building structure of a building can be selected with the drop-down menus *Portfolio* > *building* > *Building structure*.

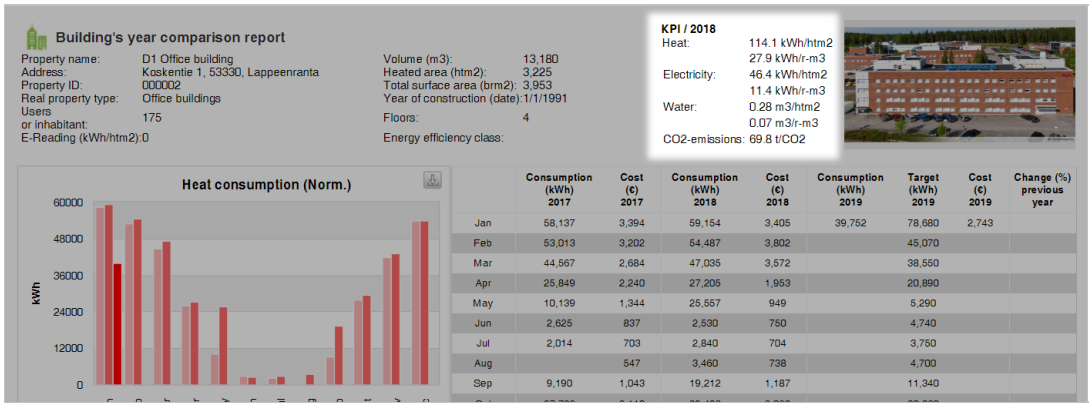
> **Note**
>
> The energy report shows the consumption of the selected building or building structure, but the KPI values refer to the building, not the building structure.

Selecting the year

Select the desired year from the *Year* drop-down menu.

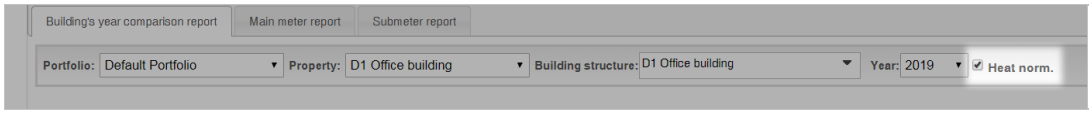


The KPI values of the previous year can be seen in the top right corner of the report.



Normalized heat

Normalized heat consumption values can be shown on the report by selecting the *Heat norm.* check box.



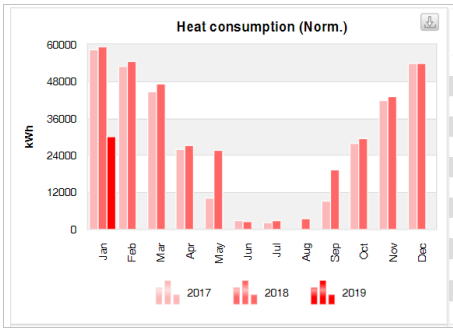
Contents of the report

Energy consumption information

The consumption of heat, electricity, water and cooling is compared to the consumption of two previous years with the accuracy of a month. Each type of energy is presented separately in its own graph.

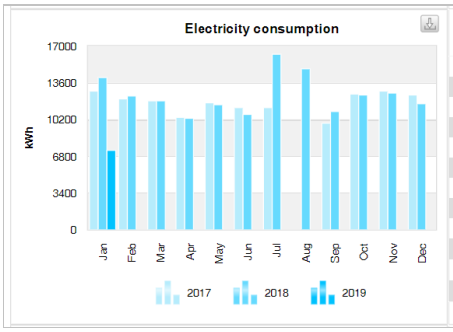
The consumption is shown both as a bar graph and as a table, which makes it possible to study the values in more detail. In addition, the table presents the costs, the target for the year being reviewed, and the change in the type of energy in question compared to the previous year.

Heat consumption



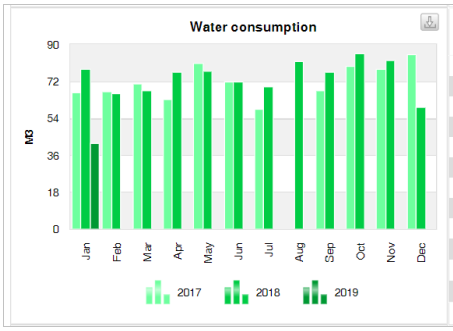
	Consumption (kWh) 2017	Cost (€) 2017	Consumption (kWh) 2018	Cost (€) 2018	Consumption (kWh) 2019	Target (kWh) 2019	Cost (€) 2019	Change (%) previous year
Jan	58,137	3,394	59,154	3,405	29,862	78,680	2,196	
Feb	53,013	3,202	54,487	3,802		45,070		
Mar	44,567	2,684	47,035	3,572		38,550		
Apr	25,849	2,240	27,205	1,953		20,890		
May	10,139	1,344	25,557	949		5,290		
Jun	2,625	837	2,530	750		4,740		
Jul	2,014	703	2,840	704		3,750		
Aug		547	3,460	738		4,700		
Sep	9,190	1,043	19,212	1,187		11,340		
Oct	27,732	2,118	29,483	2,028		30,360		
Nov	41,737	2,612	42,974	2,529		45,550		
Dec	53,803	2,913	53,951	3,402		32,550		
Total	**328,806**	**23,637**	**367,888**	**25,019**	**29,862**	**321,470**	**2,196**	

Electricity consumption



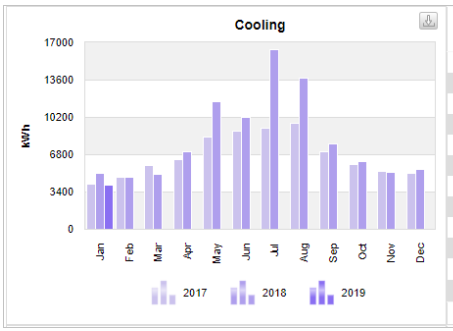
	Consumption (kWh) 2017	Cost (€) 2017	Consumption (kWh) 2018	Cost (€) 2018	Consumption (kWh) 2019	Target (kWh) 2019	Cost (€) 2019	Change (%) previous year
Jan	12,802	9,466	14,093	10,391	7,346	14,210	5,557	
Feb	12,121	8,978	12,328	9,127		14,200		
Mar	11,961	8,864	11,954	8,858		11,636		
Apr	10,401	7,746	10,343	7,705		10,273		
May	11,719	8,690	11,568	8,582		10,976		
Jun	11,268	8,367	10,673	7,941		9,738		
Jul	11,321	8,405	16,266	11,948		9,448		
Aug		294	14,866	10,945		10,663		
Sep	9,868	7,364	10,897	8,102		13,002		
Oct	12,581	9,308	12,471	9,229		13,897		
Nov	12,788	9,456	12,679	9,378		15,573		
Dec	12,424	9,195	11,607	8,610		8,368		
Total	**129,254**	**96,133**	**149,745**	**110,816**	**7,346**	**141,984**	**5,557**	

Water consumption



	Consumption (M3) 2017	Cost (€) 2017	Consumption (M3) 2018	Cost (€) 2018	Consumption (M3) 2019	Target (M3) 2019	Cost (€) 2019	Change (%) previous year
Jan	67	266	78	309	41	66	170	
Feb	67	266	66	264		58		
Mar	71	282	67	269		66		
Apr	63	252	77	304		59		
May	81	320	77	306		56		
Jun	72	285	72	286		54		
Jul	58	235	69	276		47		
Aug		11	82	324		59		
Sep	67	269	76	303		61		
Oct	79	314	86	338		52		
Nov	78	308	82	326		50		
Dec	85	337	59	238		48		
Total	**788**	**3,145**	**891**	**3,543**	**41**	**676**	**170**	

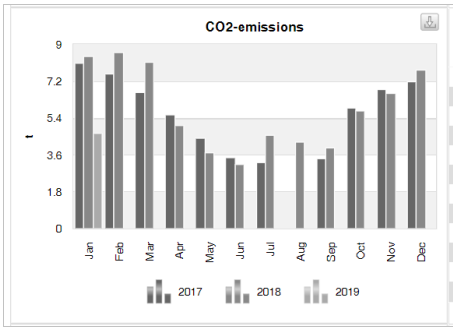
Cooling



	Consumption (kWh) 2017	Cost (€) 2017	Consumption (kWh) 2018	Cost (€) 2018	Consumption (kWh) 2019	Target (kWh) 2019	Cost (€) 2019	Change (%) previous year
Jan	4,070		5,060		3,970	4,070		
Feb	4,700		4,660			4,700		
Mar	5,800		4,950			5,800		
Apr	6,290		7,020			6,290		
May	8,390		11,560			8,390		
Jun	8,860		10,190			8,860		
Jul	9,180		16,300			9,180		
Aug	9,640		13,740			9,640		
Sep	7,010		7,760			7,010		
Oct	5,850		6,150			5,850		
Nov	5,220		5,180			5,220		
Dec	5,020		5,410			5,020		
Total	**80,030**		**97,980**		**3,970**	**80,030**		

CO2 emissions

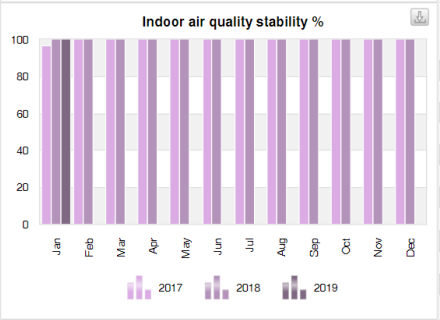
The CO2 emissions are compared to the two previous years. The emissions of the selected year are shown as a whole in the table next to the graph as well as divided by types of energy. In addition, the targets are stated, and the change compared to the previous year is calculated.



	Emissions (t) 2017	Emissions (t) 2018	Electricity portion (t) 2019	Electricity target (t) 2019	Heat portion (t) 2019	Heat target (t) 2019	Total-emissions (t) 2019	Total-target (t) 2019	Change (%) previous year
Jan	8.1	8.4	1.9	4.0	2.7	7.0	4.6	11.0	
Feb	7.6	8.6		4.0		4.0		8.0	
Mar	6.7	8.1		3.0		4.0		7.0	
Apr	5.5	5.0		3.0		2.0		5.0	
May	4.4	3.7		3.0		0.5		3.5	
Jun	3.4	3.1		3.0		0.4		3.4	
Jul	3.2	4.5		2.0				2.0	
Aug		4.2		3.0				3.0	
Sep	3.4	3.9		3.0		1.0		4.0	
Oct	5.9	5.7		4.0		3.0		7.0	
Nov	6.8	6.6		4.0		4.0		8.0	
Dec	7.2	7.8		2.0		3.0		5.0	
Total	**62**	**70**	**2**	**38**	**3**	**29**	**5**	**67**	

Indoor air quality stability

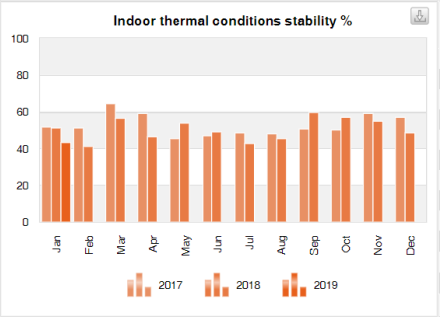
The indoor air quality stability is compared to the two previous years.



	Indoor air quality stability % 2017	Indoor air quality stability % 2018	Indoor air quality stability % 2019
Jan	97	100	100
Feb	100	100	
Mar	100	100	
Apr	100	100	
May	100	100	
Jun	100	100	
Jul	100	100	
Aug	100	100	
Sep	100	100	
Oct	100	100	
Nov	100	100	
Dec	100	100	
Average	**100**	**100**	**100**

Indoor thermal conditions stability

The indoor thermal conditions stability is compared to the two previous years.



	Indoor thermal conditions stability % 2017	Indoor thermal conditions stability % 2018	Indoor thermal conditions stability % 2019
Jan	52	51	43
Feb	51	41	
Mar	64	57	
Apr	59	46	
May	45	54	
Jun	47	49	
Jul	48	43	
Aug	48	45	
Sep	51	59	
Oct	50	57	
Nov	59	55	
Dec	57	49	
Average	**53**	**51**	**43**

Submeter report

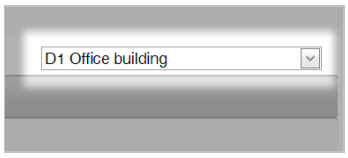
In the *Submeter report,* the consumption readings of the submeters on the building or building structure can be studied. There may be several submeters, and you can compare the consumption between different months and submeters.

You can select the desired information to be shown in the submeter report in accordance with the section Information selected for the report, after which you can update the information on the page by clicking the *Show* button.

Information selected for the report

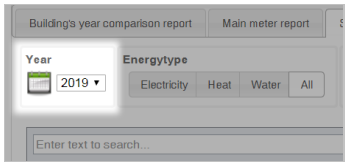
Selecting the building

Select the desired building from the drop-down menu in the top right corner of the page.



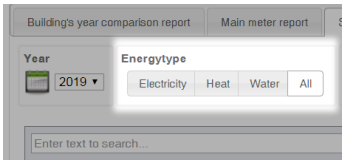
Selecting the year

Select the desired year from the *Year* drop-down menu.



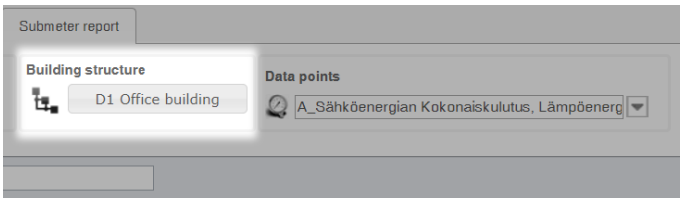
Selecting the energy type

The energy type selection buttons can be used to select the specific type of energy, the submeter readings of which you want to view. Selecting *All* means that the data points are not limited by energy type.



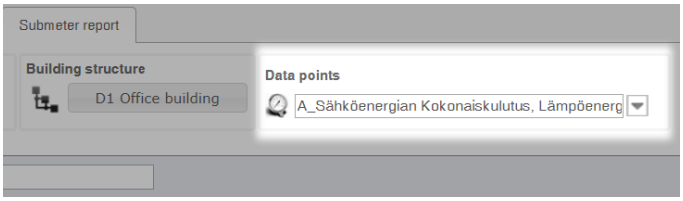
Selecting the building structure

By selecting the building structure you can limit the number of submeter readings available.



Selecting the data points

Select the data points you want to review from the *Data points* drop-down menu.

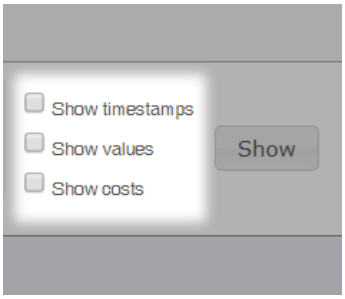


Note

Several data points can be selected for the report.

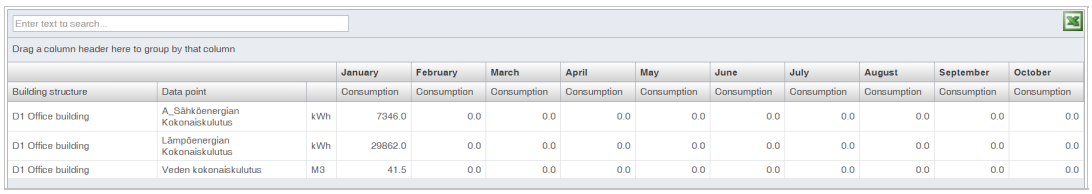
Other information on the report

Timestamps, exact values and costs can also be shown on the report by selecting the relevant check box.



Viewing submeter readings

After the desired information has been selected, the monthly consumption values of the submeter readings as well as the other information selected above are updated in the table. The table can be used to compare submeter readings as well as monthly values.



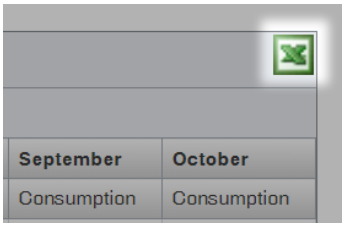
			January	February	March	April	May	June	July	August	September	October
Building structure	Data point		Consumption	Consumption	Consumption	Consumption	Consumption	Consumption	Consumption	Consumption	Consumption	Consumption
D1 Office building	A_Sähköenergian Kokonaiskulutus	kWh	7346.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
D1 Office building	Lämpöenergian Kokonaiskulutus	kWh	29862.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
D1 Office building	Veden kokonaiskulutus	M3	41.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note

There is a search field on the top of the table that can be used to search the submeter readings based on a search word.

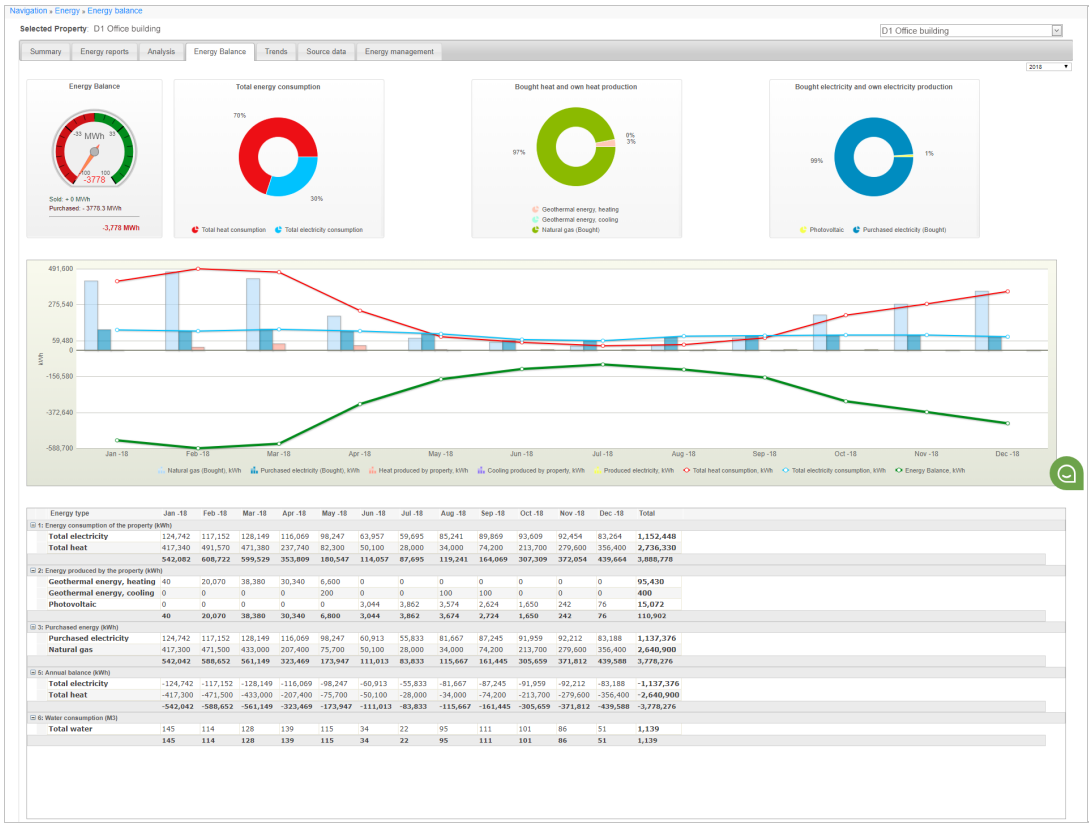
Downloading the report as an Excel file

The submeter readings can be downloaded as a separate Excel file by clicking the *Export to file (xlsx)* button in the top right corner of the table.



Energy balance

On the *Energy balance* page, you can monitor the energy balance of your properties as well as the ratio between purchased and produced energy. The information is presented both graphically and as a table under the graph.

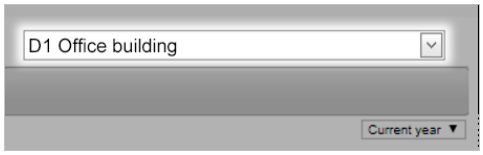


Energy type	Jan -18	Feb -18	Mar -18	Apr -18	May -18	Jun -18	Jul -18	Aug -18	Sep -18	Oct -18	Nov -18	Dec -18	Total
1: Energy consumption of the property (kWh)													
Total electricity	124,742	117,152	128,149	116,069	98,247	63,957	59,695	85,241	89,869	93,609	92,454	83,264	1,152,448
Total heat	417,340	491,570	471,380	237,740	82,300	50,100	28,000	34,000	74,200	213,700	279,600	356,400	2,736,330
	542,082	608,722	599,529	353,809	180,547	114,057	87,695	119,241	164,069	307,309	372,054	439,664	3,888,778
2: Energy produced by the property (kWh)													
Geothermal energy, heating	40	20,070	38,380	30,340	6,600	0	0	0	0	0	0	0	95,430
Geothermal energy, cooling	0	0	0	0	200	0	0	100	100	0	0	0	400
Photovoltaic	0	0	0	0	0	3,044	3,862	3,574	2,624	1,650	242	76	15,072
	40	20,070	38,380	30,340	6,800	3,044	3,862	3,674	2,724	1,650	242	76	110,902
3: Purchased energy (kWh)													
Purchased electricity	124,742	117,152	128,149	116,069	98,247	60,913	55,833	81,667	87,245	91,959	92,212	83,188	1,137,376
Natural gas	417,300	471,500	433,000	207,400	75,700	50,100	28,000	34,000	74,200	213,700	279,600	356,400	2,640,900
	542,042	588,652	561,149	323,469	173,947	111,013	83,833	115,667	161,445	305,659	371,812	439,588	3,778,276
5: Annual balance (kWh)													
Total electricity	-124,742	-117,152	-128,149	-116,069	-98,247	-60,913	-55,833	-81,667	-87,245	-91,959	-92,212	-83,188	-1,137,376
Total heat	-417,300	-471,500	-433,000	-207,400	-75,700	-50,100	-28,000	-34,000	-74,200	-213,700	-279,600	-356,400	-2,640,900
	-542,042	-588,652	-561,149	-323,469	-173,947	-111,013	-83,833	-115,667	-161,445	-305,659	-371,812	-439,588	-3,778,276
6: Water consumption (M3)													
Total water	145	114	128	139	115	34	22	95	111	101	86	51	1,139
	145	114	128	139	115	34	22	95	111	101	86	51	1,139

Information selected for the report

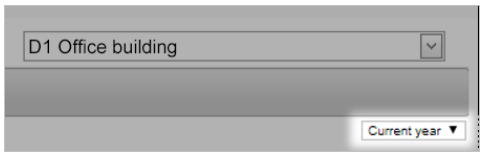
Selecting the building

Select the building from the drop-down menu in the top right corner.



Selecting the year

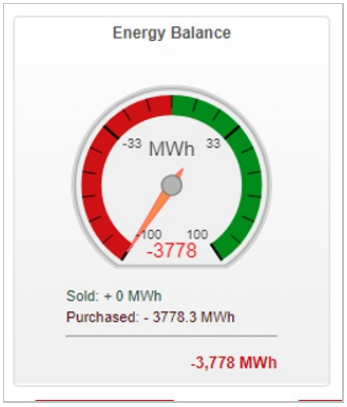
Select the year below the selected building. The current year is used for the report by default.



Contents of the report

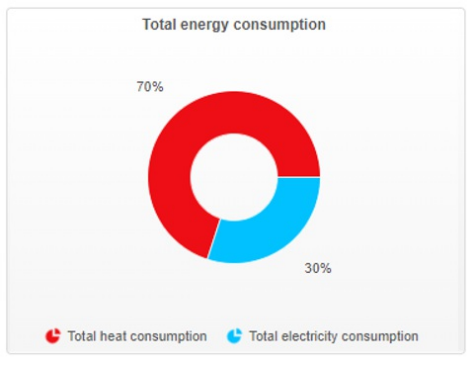
Energy balance

The *Energy balance* indicator shows the amounts of sold and purchased energy as well as the difference between them.



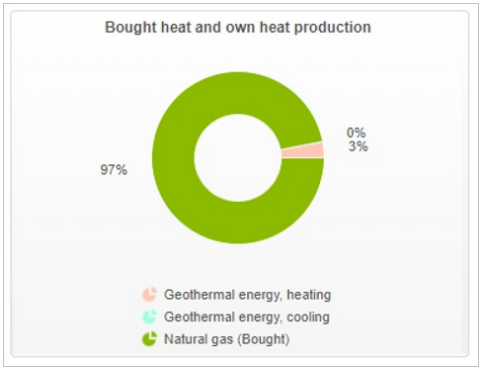
Total energy consumption

The *Total energy consumption* graph shows how the total consumption is divided by type of energy.



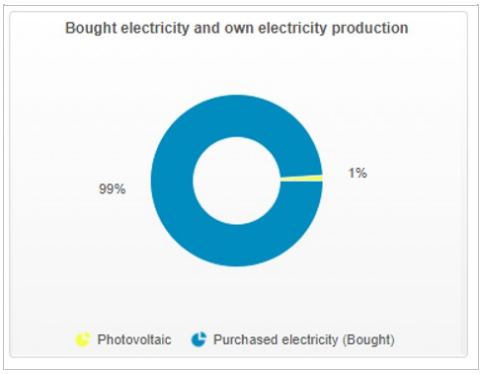
Purchased heat and heat production

The *Purchased heat and heat production* graph shows the division between purchased and produced heat.



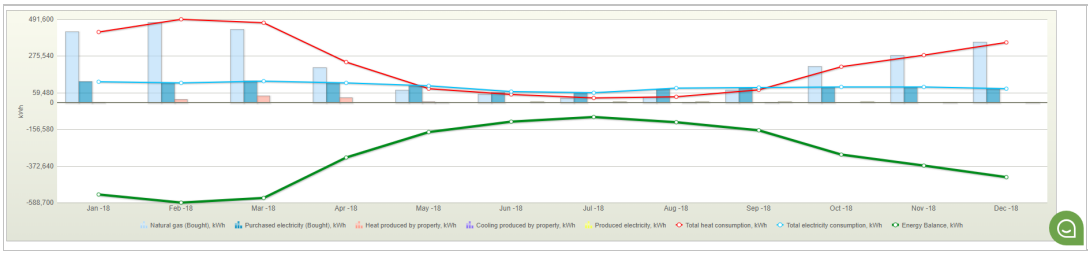
Purchased electricity and electricity production

The *Purchased electricity and electricity production* graph shows the ratio between purchased and produced electricity.



Energy balance graph

The graph shows the energy balance, the total electricity consumption, the total heat consumption, as well as the amounts of purchased and produced energy.



Table

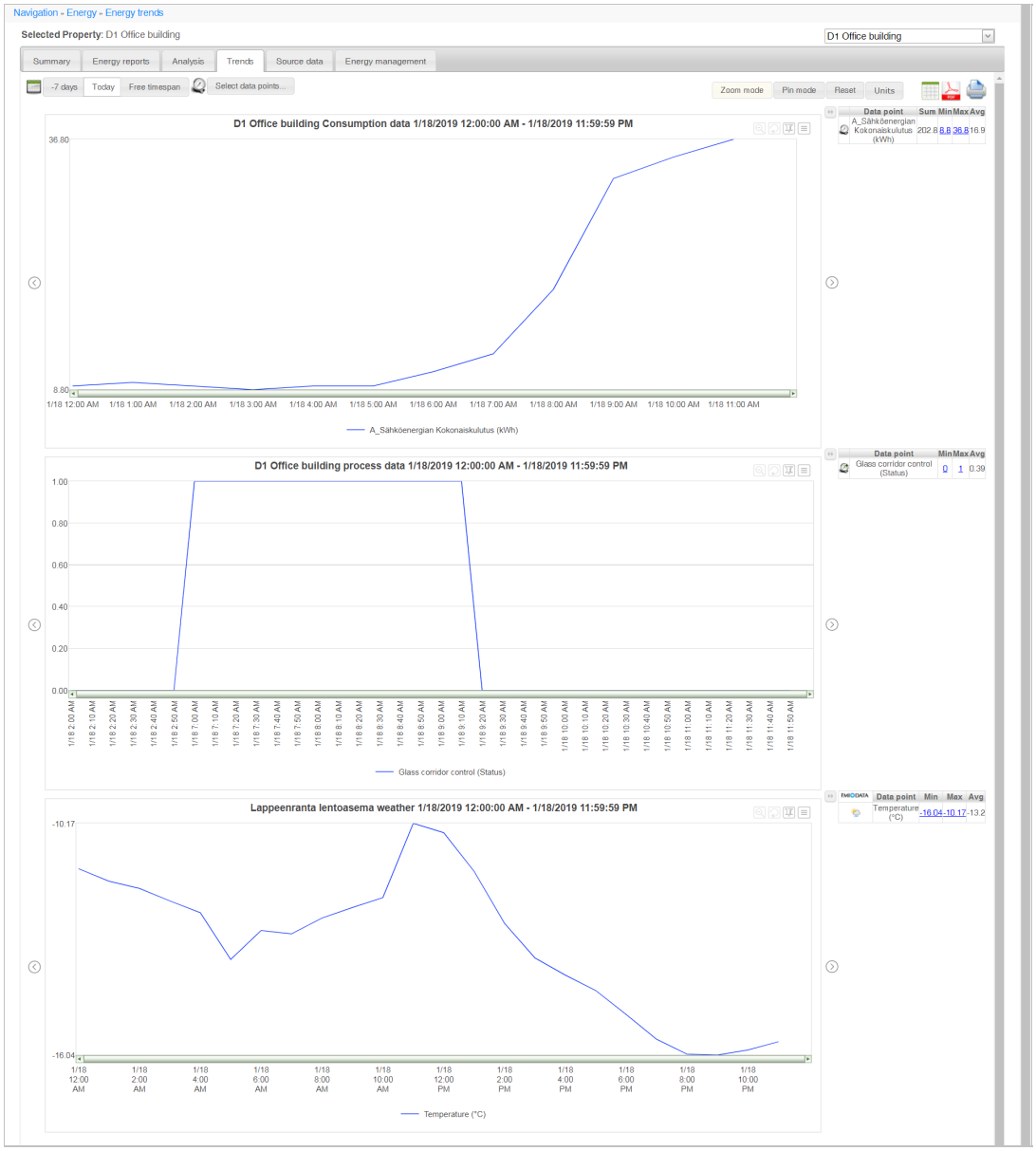
The values of the graph are shown as a table below the graph. In the table, you can see the exact values by type of energy with the accuracy of one month, as well as the sums total.

Energy type	Jan -18	Feb -18	Mar -18	Apr -18	May -18	Jun -18	Jul -18	Aug -18	Sep -18	Oct -18	Nov -18	Dec -18	Total
1: Energy consumption of the property (kWh)													
Total electricity	124,742	117,152	128,149	116,069	98,247	63,957	59,695	85,241	89,869	93,609	92,454	83,264	**1,152,448**
Total heat	417,340	491,570	471,380	237,740	82,300	50,100	28,000	34,000	74,200	213,700	279,600	356,400	**2,736,330**
	542,082	**608,722**	**599,529**	**353,809**	**180,547**	**114,057**	**87,695**	**119,241**	**164,069**	**307,309**	**372,054**	**439,664**	**3,888,778**
2: Energy produced by the property (kWh)													
Geothermal energy, heating	40	20,070	38,380	30,340	6,600	0	0	0	0	0	0	0	**95,430**
Geothermal energy, cooling	0	0	0	0	200	0	0	100	100	0	0	0	**400**
Photovoltaic	0	0	0	0	0	3,044	3,862	3,574	2,624	1,650	242	76	**15,072**
	40	**20,070**	**38,380**	**30,340**	**6,800**	**3,044**	**3,862**	**3,674**	**2,724**	**1,650**	**242**	**76**	**110,902**
3: Purchased energy (kWh)													
Purchased electricity	124,742	117,152	128,149	116,069	98,247	60,913	55,833	81,667	87,245	91,959	92,212	83,188	**1,137,376**
Natural gas	417,300	471,500	433,000	207,400	75,700	50,100	28,000	34,000	74,200	213,700	279,600	356,400	**2,640,900**
	542,042	**588,652**	**561,149**	**323,469**	**173,947**	**111,013**	**83,833**	**115,667**	**161,445**	**305,659**	**371,812**	**439,588**	**3,778,276**
5: Annual balance (kWh)													
Total electricity	-124,742	-117,152	-128,149	-116,069	-98,247	-60,913	-55,833	-81,667	-87,245	-91,959	-92,212	-83,188	**-1,137,376**
Total heat	-417,300	-471,500	-433,000	-207,400	-75,700	-50,100	-28,000	-34,000	-74,200	-213,700	-279,600	-356,400	**-2,640,900**
	-542,042	**-588,652**	**-561,149**	**-323,469**	**-173,947**	**-111,013**	**-83,833**	**-115,667**	**-161,445**	**-305,659**	**-371,812**	**-439,588**	**-3,778,276**
6: Water consumption (M3)													
Total water	145	114	128	139	115	34	22	95	111	101	86	51	**1,139**
	145	**114**	**128**	**139**	**115**	**34**	**22**	**95**	**111**	**101**	**86**	**51**	**1,139**

Energy trends

The *Trends* page is a useful tool for determining the consumption profile of the building.

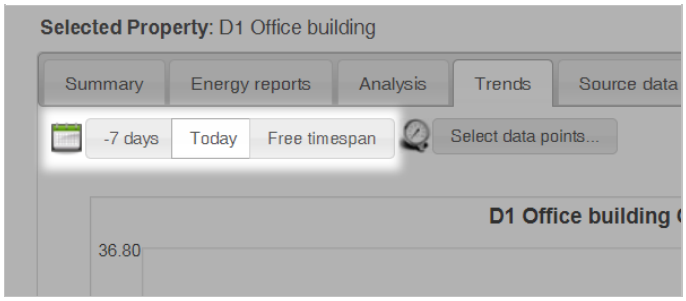
On the *Trends* page, the trends of the building's consumption and process data as well as weather can be reviewed with the accuracy of an hour. You can select more than one data point, meaning that you can compare the trends with each other.



Selecting information

Selecting the timespan

Select the timespan for following the trends by using the selections at the top of the page.



-7 days

If you select *-7 days* as the timespan, the trends of the past week are shown.

Today

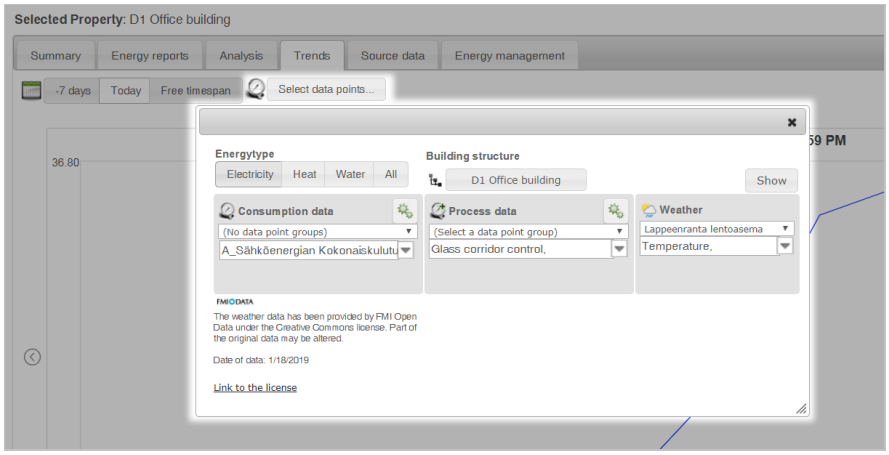
If you select *Today* as the timespan, the trends of the current day are shown.

Free timespan

Free timespan allows you to enter the timespan manually. The maximum length of the free timespan is 12 months.

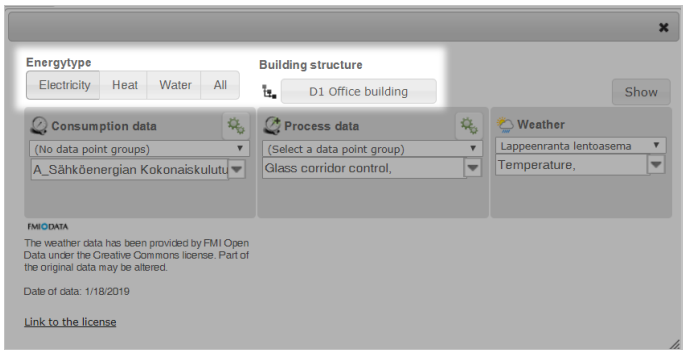
Selecting the data points

Select the data points in the *data point selection window.* You can display the window by clicking the *Select data points...* button.



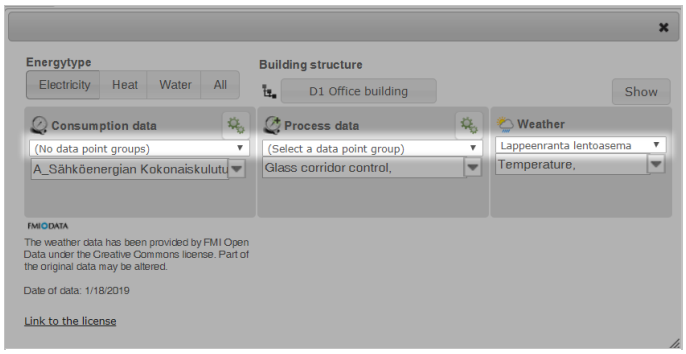
Filtering data points

Data points can be entered with the selections at the top of the page based on the type of energy and the building structure.



Selecting a data point group

Data points can be grouped into data point groups, and you can choose the desired group from the *Select a data point group* drop-down menu above each data point's drop-down menu.



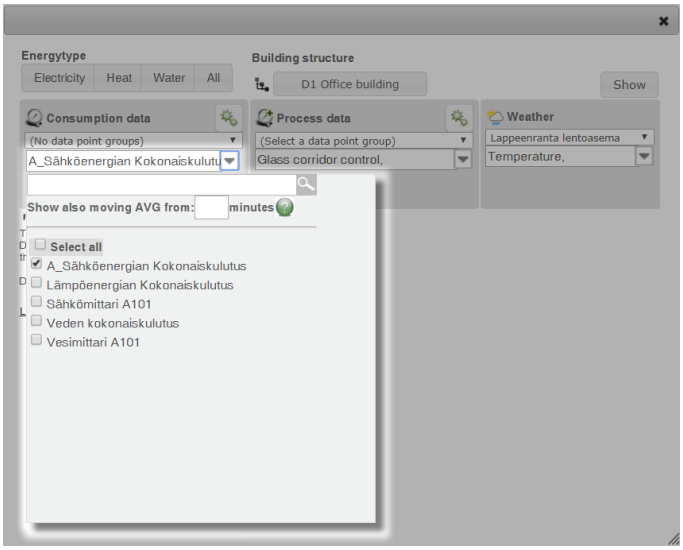
Note

If data points have not been grouped, the selection shown in the *Select a data point group* drop-down menu is *(No data point groups)*.

Selecting the data points for the trend report

Select the desired data types for the trend report from each data type's drop-down menu. The data types in the trend report are as follows:

- Consumption data
- Process data
- Weather



When the data points have been selected, you can update them on the page by clicking the *Show* button.

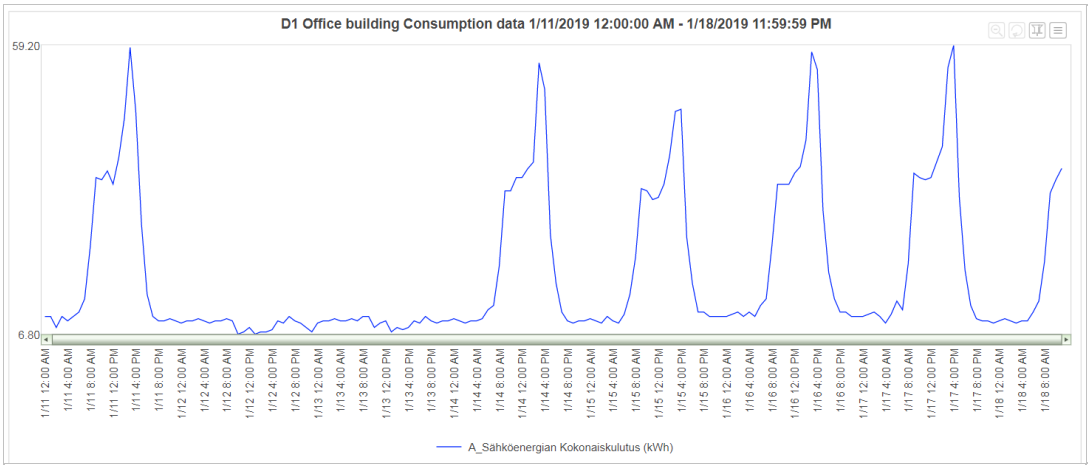
Note

A maximum of 15 data points can be selected for the graphs.

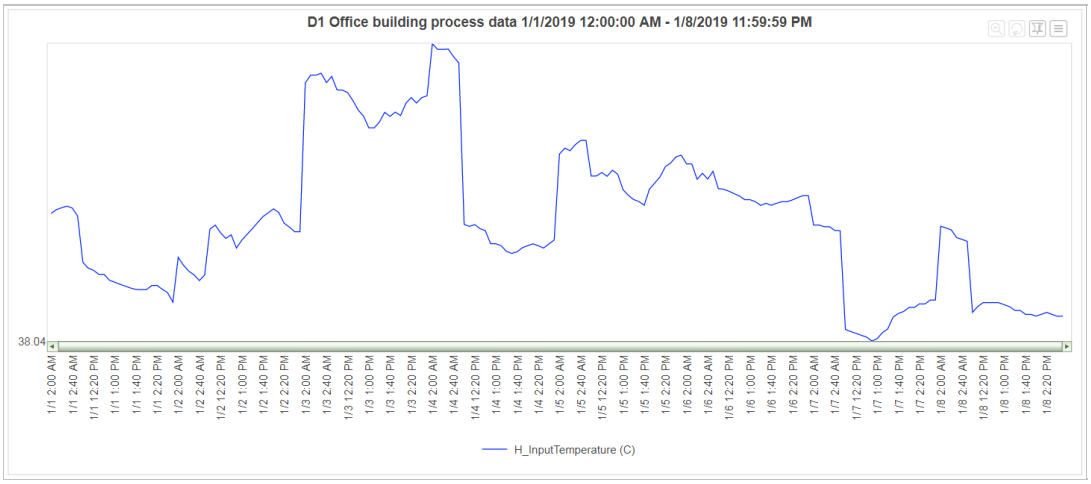
Viewing the results on the browser

The values of the selected data points during the selected timespan are shown in the graphs by data type. Next to each graph there is a table showing information related to the data points, such as the sum (only for the consumption data points), the minimum value and the average.

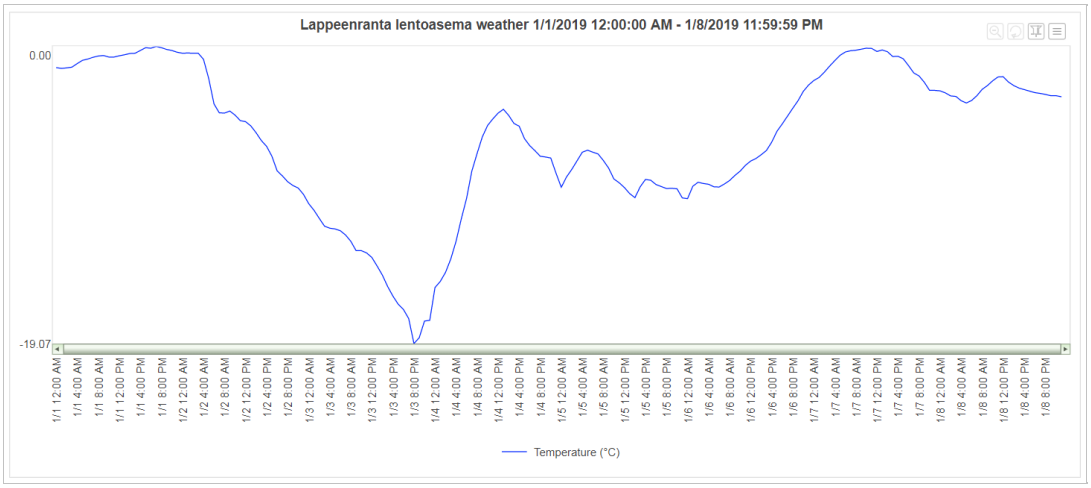
Consumption data



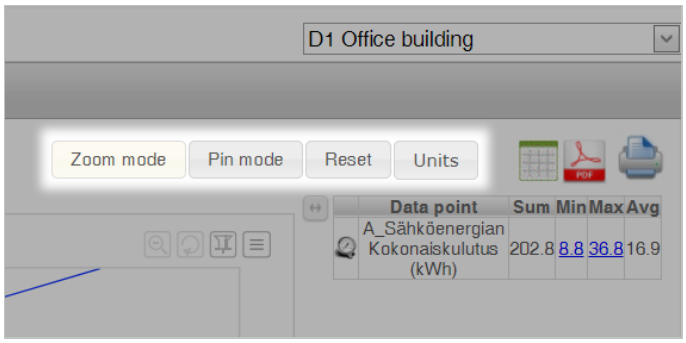
Process data



Weather



Additional selections for graphs



Zoom mode

In the *zoom mode,* a timespan on the graph can be selected with the mouse; after selection, the timespan is updated and displayed on the whole width of the graph. This allows a more detailed review of the measured values during the desired timespan.

Pin mode

In the *pin mode,* a timespan on the graph can be selected with the mouse; after selection, the selected values can be dragged to another section of the graph. This makes it possible to place values from different timespans on top of each other for comparison.

Reset

By clicking the *Reset* button, the selections made in the zoom and pin mode can be removed and the page updated back to its original status.

Units

Clicking the *Units* button opens a window, in which the units used on the graphs can be selected.

Viewing the results in different file formats

Viewing the results as a grid

The graphs of the selected data points during the selected timespan can be shown in a grid on a separate tab by clicking the Show data in grid button ( ).

Downloading the results as a PDF file

The graphs of the selected data points during the selected timespan can be downloaded as a separate PDF file by clicking the *Download PDF-file* button ( ).

Printing out the results

The graphs of the selected data points during the selected timespan can be printed out by clicking the *Print page* button ( ).

Energy management

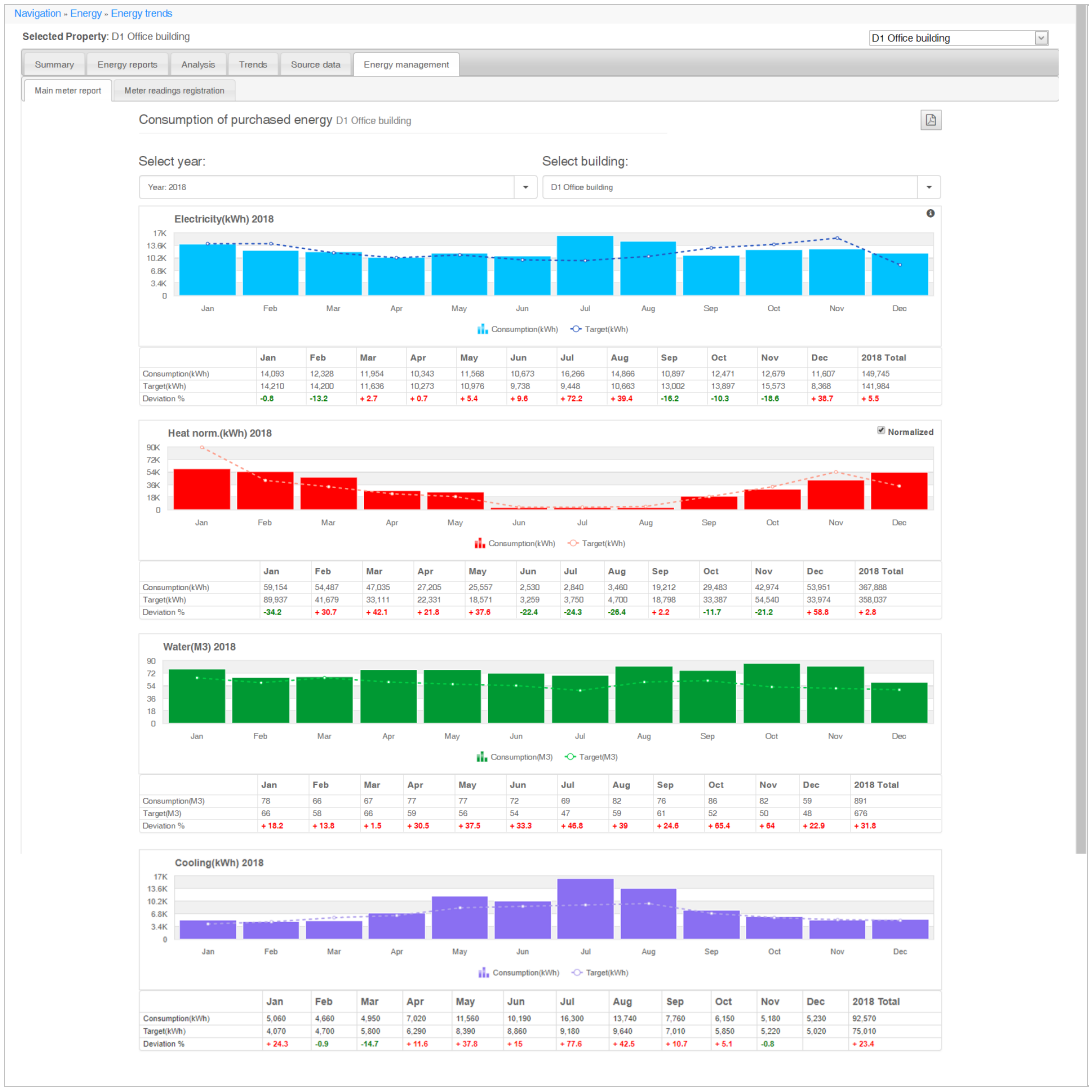
Main meter report

The *Main meter report* shows the consumption of purchased energy in the selected building by type of energy. Purchased energy includes electricity, heat, water and cooling, all of which have a separate graph on the main meter report.

The consumption can be compared with a target set for each building by the administrator.

Note

The main meter report only shows the amount of purchased energy. The total energy consumption may differ from the amount of purchased energy.



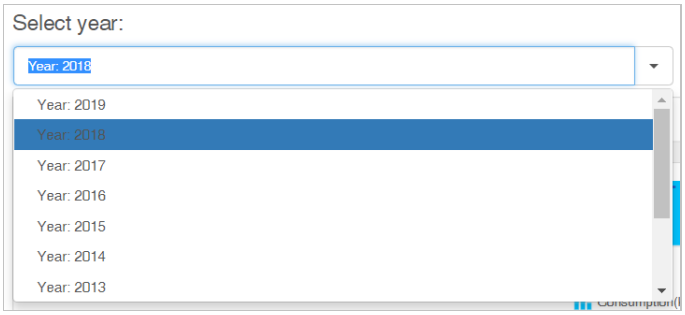
Information selected for the report

Selecting the year

The consumption of purchased energy is shown by year by default. Select the desired year from the *Select year* drop-down menu.

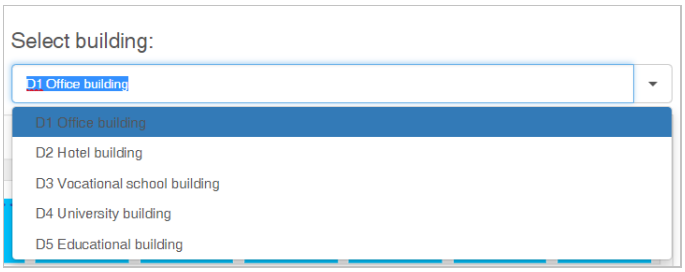
Note

The daily or monthly information can be seen in the monthly or daily view.



Selecting the building

If more than one building has been specified in the Portal, the information of the building's purchased energy is shown on a building-specific basis. Select the desired building from the *Select building* drop-down menu.



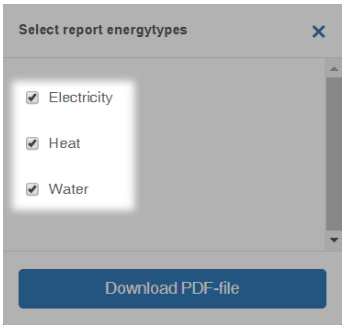
Note

The administrator specifies the buildings shown to the user.

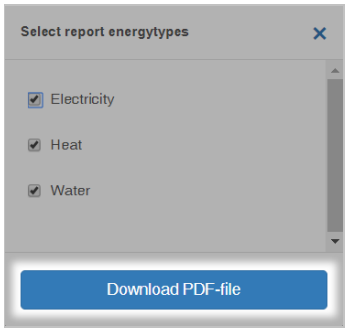
Downloading a report

A report on the consumption of purchased energy for the selected building and year can be downloaded as a PDF file by clicking the *Download PDF-file* button ( ) in the top right corner of the screen.

In the window that opens, select the types of energy to be included in the report.



After selecting the desired energy types, download the PDF file by clicking the *Download PDF-file* button.

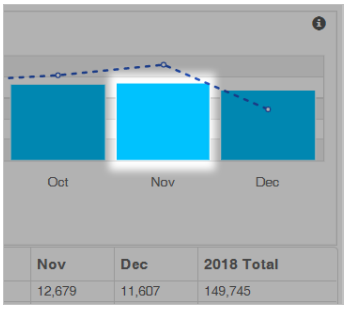


Report graphs

The consumption graphs can be viewed on three different levels

- Year view
- Month view
- Day view

You can browse the views by drilling into the selected value on the graph. Click a column in the graph to drill into the graph.

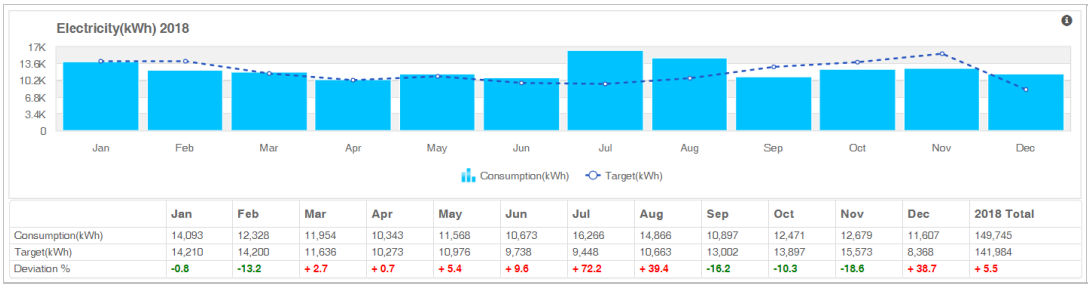


You can return to the previous view by clicking the *Back* button in the top right corner.

The values presented in the graph can also be shown by clicking the *Show values* button in the top right corner.

Year view

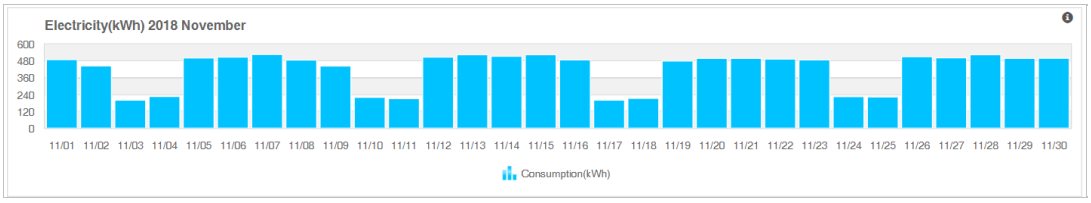
The *year view* shows the consumption values of purchased energy for the selected year by month. The monthly consumption can be compared to the target values.



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2018 Total
Consumption(kWh)	14,093	12,328	11,954	10,343	11,568	10,673	16,266	14,866	10,897	12,471	12,679	11,607	149,745
Target(kWh)	14,210	14,200	11,636	10,273	10,976	9,738	9,448	10,663	13,002	13,897	15,573	8,368	141,984
Deviation %	-0.8	-13.2	+ 2.7	+ 0.7	+ 5.4	+ 9.6	+ 72.2	+ 39.4	-16.2	-10.3	-18.6	+ 38.7	+ 5.5

Month view

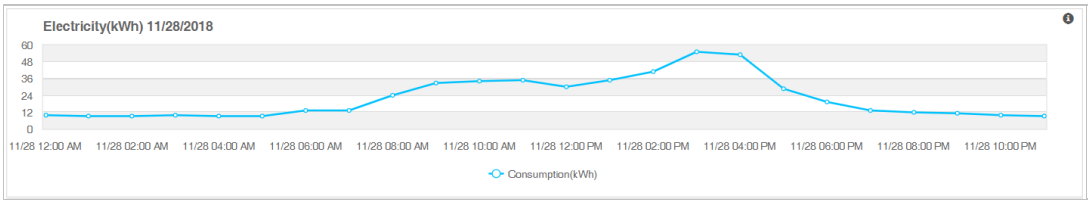
The *month view* shows the consumption values of purchased energy for the selected month by day.



> **Note**
>
> The target values are only shown in the year view.

Day view

The day view shows the purchased energy consumption values for the selected day by hour.



Note

The target values are only shown in the year view.

Energy types

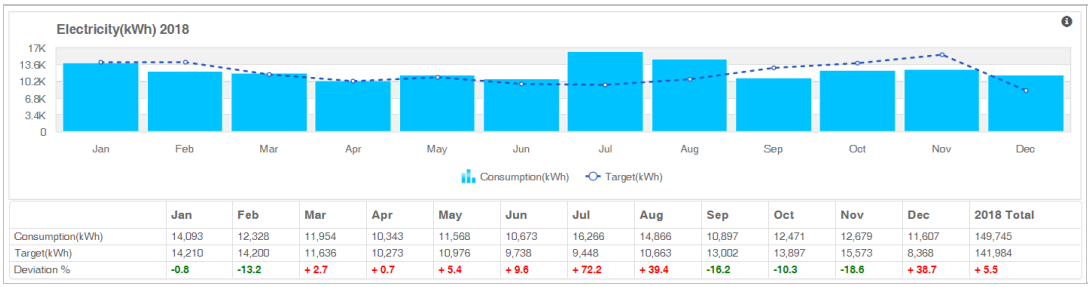
Each type of energy has its own graph that displays the consumption compared to the target.

The consumption and target values and the deviation percentage are shown in the table below the graph. The deviation percentage tells how well the consumption matches with the target.

The total amount of purchased energy is shown in the *Total* column of each table.

Electricity

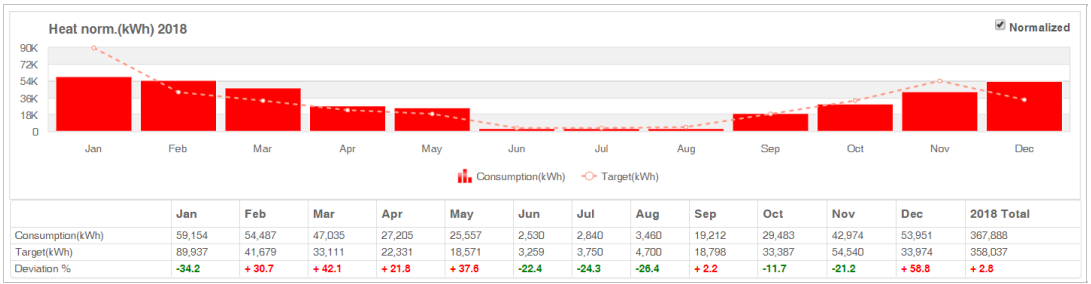
The *Electricity* graph shows the amount of purchased electricity for the selected time period.



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2018 Total
Consumption(kWh)	14,093	12,328	11,954	10,343	11,568	10,673	16,266	14,866	10,897	12,471	12,679	11,607	149,745
Target(kWh)	14,210	14,200	11,636	10,273	10,976	9,738	9,448	10,663	13,002	13,897	15,573	8,368	141,984
Deviation %	-0.8	-13.2	+ 2.7	+ 0.7	+ 5.4	+ 9.6	+ 72.2	+ 39.4	-16.2	-10.3	-18.6	+ 38.7	+ 5.5

Heat norm.

The *Heat norm.* graph shows the amount of purchased electricity used for heating for the selected time period.



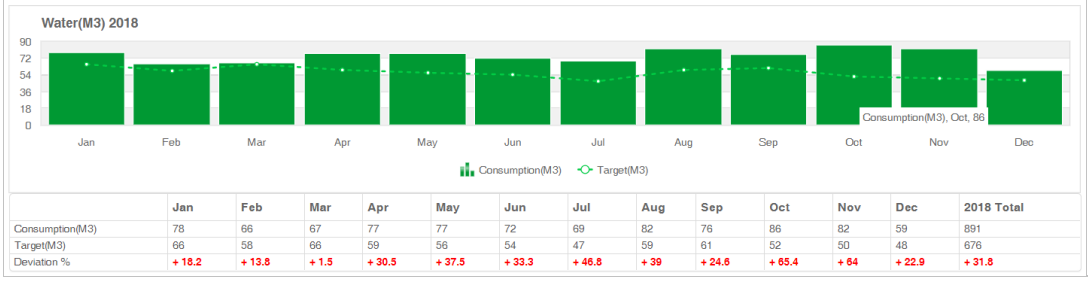
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2018 Total
Consumption(kWh)	59,154	54,487	47,035	27,205	25,557	2,530	2,840	3,460	19,212	29,483	42,974	53,951	367,888
Target(kWh)	89,937	41,679	33,111	22,331	18,571	3,259	3,750	4,700	18,798	33,387	54,540	33,974	358,037
Deviation %	-34.2	+ 30.7	+ 42.1	+ 21.8	+ 37.6	-22.4	-24.3	-26.4	+ 2.2	-11.7	-21.2	+ 58.8	+ 2.8

Note

The values of the Heat norm. graph can be normalized by selecting the *Normalized* check box in the top right corner of the graph.

Water

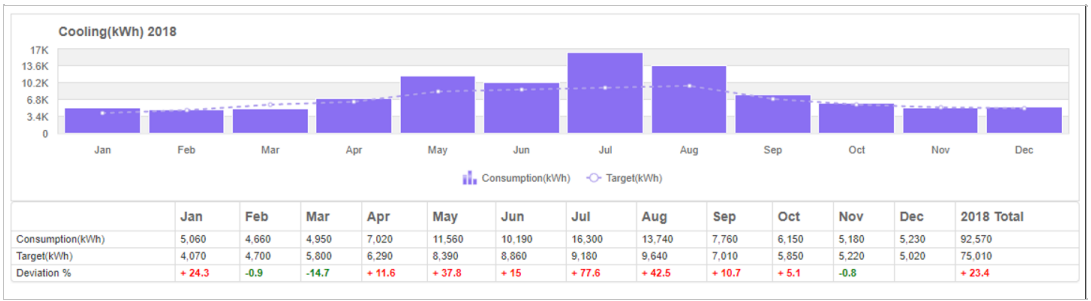
The *Water* graph shows the amount of purchased water consumed during the selected time period.



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2018 Total
Consumption(M3)	78	66	67	77	77	72	69	82	76	86	82	59	891
Target(M3)	66	58	66	59	56	54	47	59	61	52	50	48	676
Deviation %	+ 18.2	+ 13.8	+ 1.5	+ 30.5	+ 37.5	+ 33.3	+ 46.8	+ 39	+ 24.6	+ 65.4	+ 64	+ 22.9	+ 31.8

Cooling

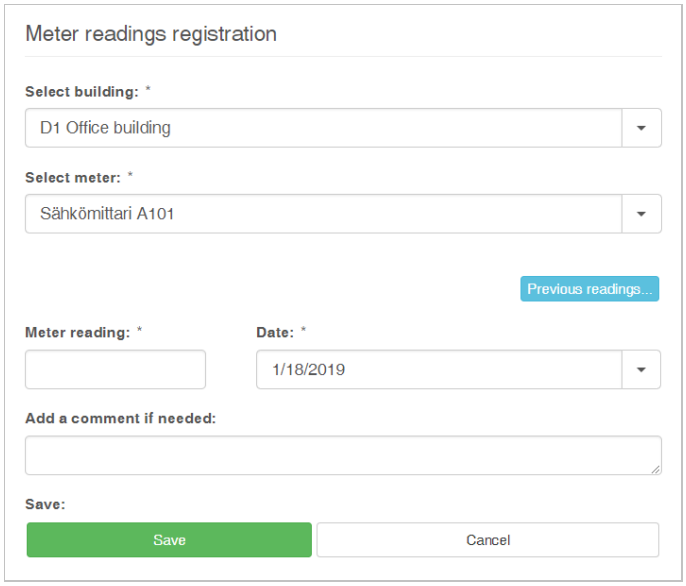
The *Cooling* graph shows the amount of purchased electricity used for cooling during the selected time period.



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2018 Total
Consumption(kWh)	5,060	4,660	4,950	7,020	11,560	10,190	16,300	13,740	7,760	6,150	5,180	5,230	92,570
Target(kWh)	4,070	4,700	5,800	6,290	8,390	8,860	9,180	9,640	7,010	5,850	5,220	5,020	75,010
Deviation %	+ 24.3	-0.9	-14.7	+ 11.6	+ 37.8	+ 15	+ 77.6	+ 42.5	+ 10.7	+ 5.1	-0.8		+ 23.4

Meter readings registration

Meter readings registration is a tool that can be used to register meter readings in the system manually. If the building's meter readings are not read automatically, this tool can be used to enter them manually.



Entering meter readings into the system

Required information

The following information is required to register meter readings:

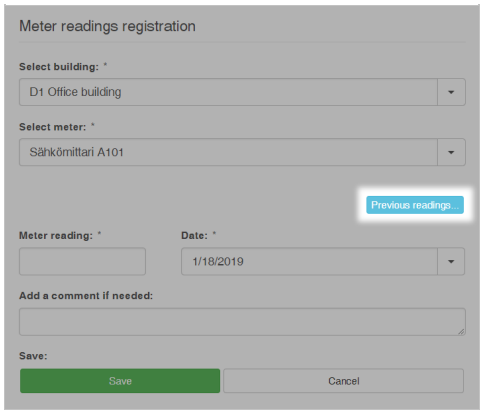
1. Building
2. The meter, whose readings will be registered
3. Meter reading
4. Date when the meter reading was read
5. Comment (not required)

Note

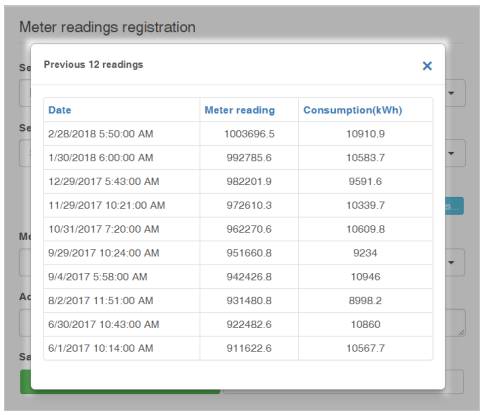
If the meter reading is entered with a decimal, the language selected in the Variable: Portaali is not defined in the project. determines the decimal separator. (Use a comma ',' in Finnish and a period '.' in English)

Viewing previous readings

Open the previous readings by clicking the *Previous readings...* button.



The following window opens.



Note

Consumption is a value calculated automatically for each meter reading that indicates the difference between the new and the previous reading.

Saving the meter reading

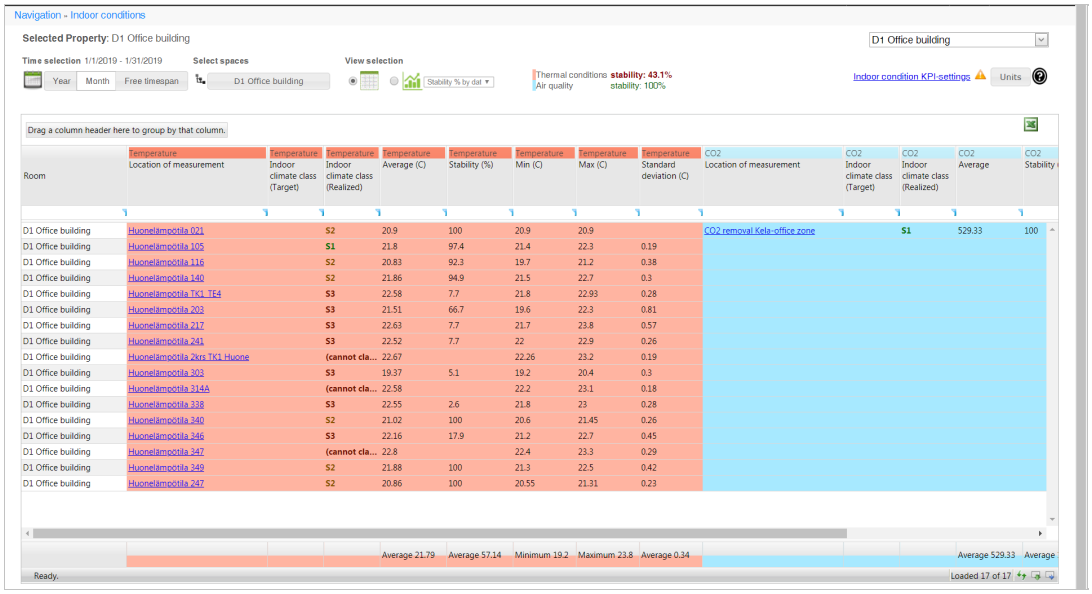
In order to save the new meter reading in the system, click the *Save* button. The *Cancel* button clears the meter reading fields.

Indoor conditions

Indoor conditions - Data

Indoor conditions - Data

On the page *Indoor conditions - Data*, you can view the development of the indoor conditions of a building, building section or individual data point.



Indoor climate classification

The indoor climate classes are S1, S2 and S3.

S1 is the best and S3 the poorest. The indoor conditions classification and stability calculations comply with the RT07-10946 standard. The standard is more specific than the static class limits, which are based on seasons. The standard also yields better results, especially in spring and autumn.

Note

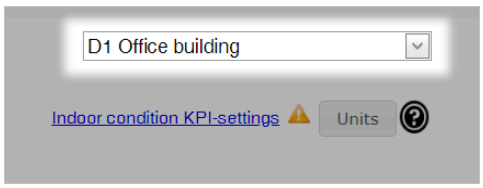
Further information: https://www.rakennustieto.fi/kortistot/rt/kortit/10946

For more information about indoor classes, please consult the Indoor classes section of this guide.

Information selected for the report

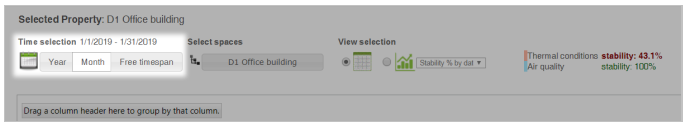
Selecting the building

Select the building in the drop-down menu on the top right corner of the page.



Selecting the timespan

Select the timespan for which to view indoor data from the settings at the top of the page.



Year

With the *Year* selection you can select the timespan with a year's accuracy. The *Current year* shows the information of the current year and a several year long timespan can be selected with the *Start year* and *End year* options.

Month

With the *Month* selection you can select the timespan with a month's accuracy. The timespan can be selected with the *Start month*, *Start year*, *End month* and *End year* options.

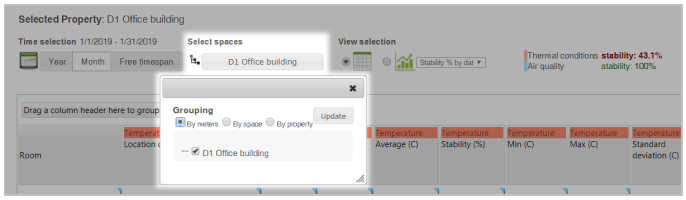
Free timespan

With the *Free timespan* selection you can enter the timespan as dates in a calendar view.

> **Huomio**
>
> You can update the timespan to the page by pressing the *Show* button on the pop up window.

Selecting spaces

The *Select spaces* opens a pop-up window where you can group and limit the information viewed.



Grouping:

- *By meters* shows the data of individual data points in a table.
- *By space* shows the data of the whole building section.
- *By property* shows the data for the whole building.

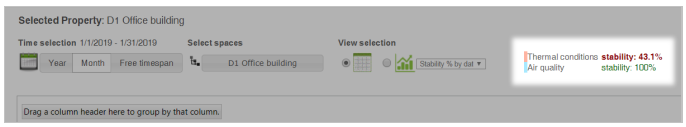
The selection of building section under the grouping allows you to limit the selection to only apply to a specific building section/space.

View selection

View selection makes it possible to view data in table format or graph format. You can select the KPIs to be displayed in graph view from the drop-down menu.

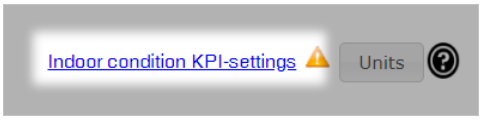
Stability of thermal conditions and air quality

KPIs of thermal conditions and air quality are displayed right of the view selection.



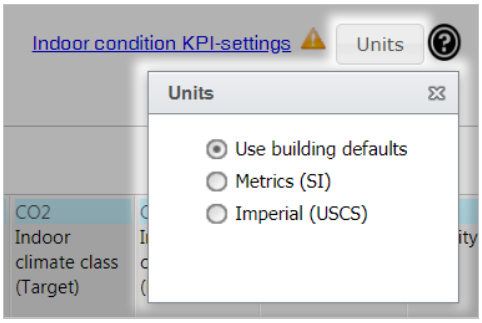
Indoor conditions KPI settings

The *Indoor conditions KPI settings* link takes you directly to indoor condition settings, where you can edit indoor conditions KPI settings.



Selecting units

You can select the units used in the pop-up window that opens when you select the *Units* button.



Viewing report data

The desired indoor climate data is presented in either table or graph format, depending on the view selection. By adjusting the timespan, space or limits, you can view data all the way down to data point level.

Select a data point/building section in the table to delve deeper into the trend, which opens in a new tab.

Downloading the report in table format

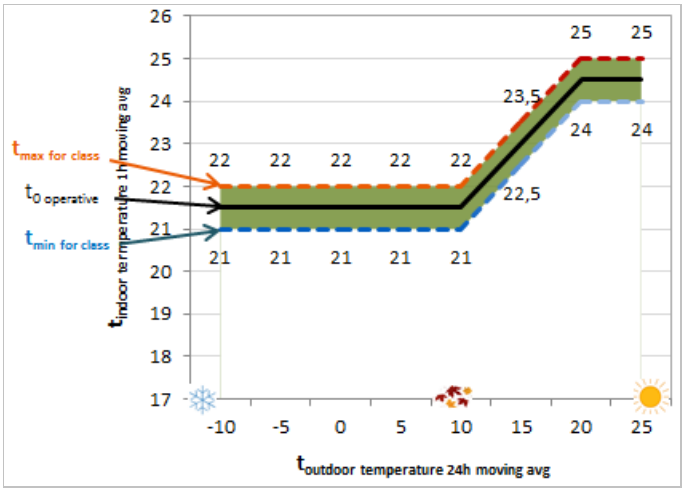
You can download the report in xlsx format by selecting the *Download Excel file* button ( ) at the top right corner of the table.

Indoor climate classes

Temperature stability and classification based on outdoor temperature

Indoor climate classification uses outdoor temperature data from the nearest weather station. Indoor climate classification is done in proportion to a sliding 24-hour average of outdoor temperature. Where outdoor temperatures measured at the weather station are not available, the outdoor temperature measured directly on the building can be used.

You can also set an operative (target) temperature for indoor temperature measurement. The default is 21.5 degrees, and this operative temperature can be changed in the settings. Calculation of indoor climate classification and stability is demonstrated in the figure below. The measured indoor temperature must be between the class minimum and maximum (green line) in order to belong in the class in question. Class limits change according to the outdoor temperature. The operative (target) temperature is at the middle of the green line.



Temperature default limits by class

Target temperature and permitted deviations at different temperatures (T = outdoor temperature)

	S1	S2	S3
T ≤ 10 °C	21.5 °C	21.5 °C	21.5 °C
10 °C < T ≤ 20 °C	21.5 °C + 0.3*(T-10 °C)	21.5 °C + 0.3*(T-10 °C)	21.5 °C + 0.4*(T-10 °C)
T > 20 °C	24.5 °C	24.5 °C	25 °C
Permissible deviation from target	+-0.5 °C	+-1 °C	+-1 °C

Default limits according to the season

Summer: 1 April–30 September

Winter: 1 October–3 March (FIN)

Note

Static class limits for summer or winter are used in temperature condition classification ONLY when the outdoor temperature is not available. Under normal circumstances, dynamic class limits based on the outdoor temperature are used.

Indoor climate class	Type	Min summer	Max summer	Min winter	Max winter
S1	Indoor temperature (°C)	23	24	21	22
S1	Relative humidity (%)			25	25
S1	CO2 (ppm)	0	750	0	750
S2	Indoor temperature (°C)	23	26	20	22
S2	Relative humidity (%)				
S2	CO2 (ppm)	0	900	0	900
S3	Indoor temperature (°C)	22	27	20	23
S3	Relative humidity (%)				
S3	CO2 (ppm)	0	1,200	0	1,200

Class-specific stability limits

S1 Business and teaching spaces: 95% of utilization time. Residential spaces: 90% of utilization time.

S2 Business and teaching spaces: 90% of utilization time. Residential spaces: 80% of utilization time.

S3 No stability limits

Note

Stability and classification

Stability is calculated from the target class, if one has been set. If a target has not been set, stability is calculated from the realized class. Static class limits for summer or winter are used in temperature condition classification ONLY when the outdoor temperature is not available.

Note

Building types

If the building type is office building, indoor climate classification is by default calculated on weekdays between 7 am and 5 pm. For other building types, indoor climate classification is calculated for every hour and every day. You can change these utilization times affecting classification in the settings.

Admin

Energy settings

Indoor condition settings

Energy settings

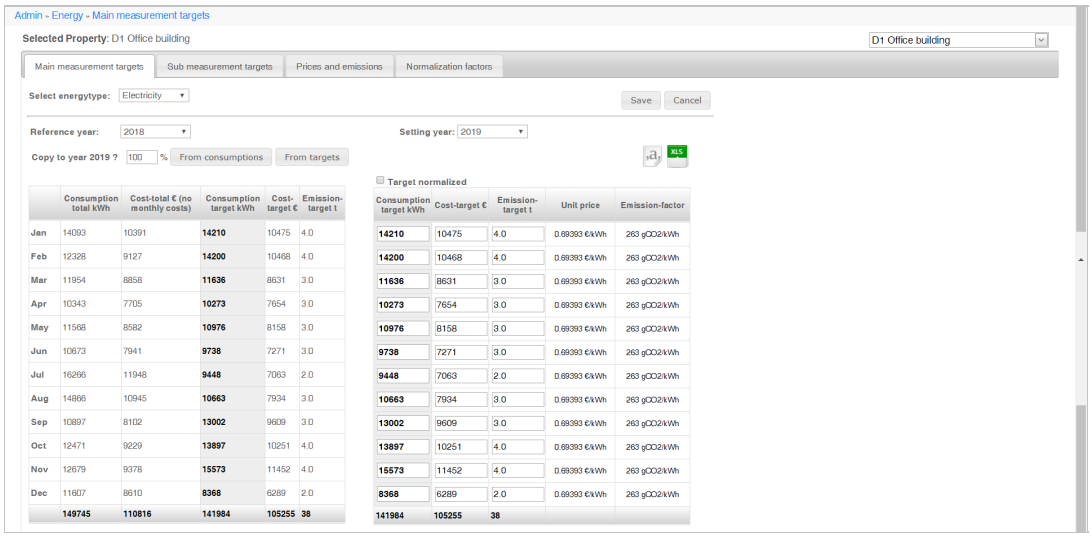
Main measurement targets
Sub measurement targets
Prices and emissions
Normalization factors

Main measurement targets

On the *Main measurement targets* settings page, consumption targets for the main measurements of the building can be set by energy type. Based on the consumption targets, the Portal calculates the price and CO2 emission targets for the building automatically.

Targets can be created based on the previous year's targets or the realized consumption. For example, 90% of the last year's consumption can be set as the target level. Targets can also be entered manually, if data from previous years do not exist or if you do not want to use them.

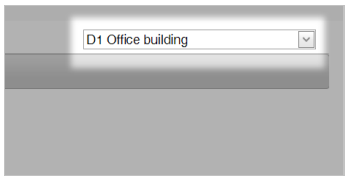
Calculating the price and CO2 emission targets requires that the prices and the CO2 emission factors have been set on the Prices and emissions settings page.



Setting consumption targets

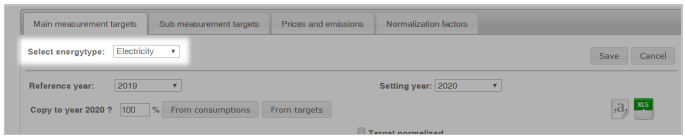
Selecting the building

Select the building, for which you want to set consumption targets from the drop-down menu in the top right corner of the page.



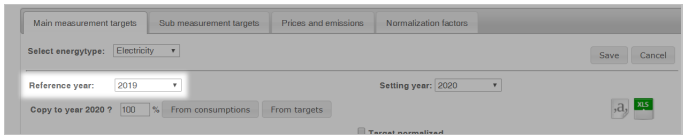
Selecting the energy type

Select the energy type, for which you want to set consumption targets from the *Select energy type* drop-down menu.



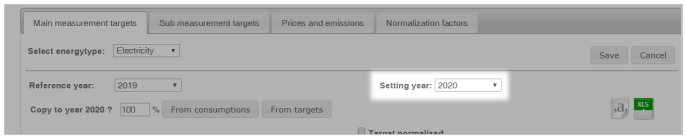
Selecting the reference year

Select the year used as reference from the *Reference year* drop-down menu.



Selecting the setting year

Select the year, for which you want to set consumption targets from the *Setting year* drop-down menu.



Reviewing the targets

The realized consumptions from the selected reference year are shown in the table on the left.

You can add targets for the setting year in the table on the right either by using the reference year data as a basis or by editing them manually.

	Consumption total kWh	Cost-total € (no monthly costs)	Consumption target kWh	Cost-target €	Emission-target t
Jan	14093	10391	**14210**	10475	4.0
Feb	12328	9127	**14200**	10468	4.0
Mar	11954	8858	**11636**	8631	3.0
Apr	10343	7705	**10273**	7654	3.0
May	11568	8582	**10976**	8158	3.0
Jun	10673	7941	**9738**	7271	3.0
Jul	16266	11948	**9448**	7063	2.0
Aug	14866	10945	**10663**	7934	3.0
Sep	10897	8102	**13002**	9609	3.0
Oct	12471	9229	**13897**	10251	4.0
Nov	12679	9378	**15573**	11452	4.0
Dec	11607	8610	**8368**	6289	2.0
	149745	**110816**	**141984**	**105255**	**38**

Target normalized

Consumption target kWh	Cost-target €	Emission-target t	Unit price	Emission-factor
14210	10475	4.0	0.69393 €/kWh	263 gCO2/kWh
14200	10468	4.0	0.69393 €/kWh	263 gCO2/kWh
11636	8631	3.0	0.69393 €/kWh	263 gCO2/kWh
10273	7654	3.0	0.69393 €/kWh	263 gCO2/kWh
10976	8158	3.0	0.69393 €/kWh	263 gCO2/kWh
9738	7271	3.0	0.69393 €/kWh	263 gCO2/kWh
9448	7063	2.0	0.69393 €/kWh	263 gCO2/kWh
10663	7934	3.0	0.69393 €/kWh	263 gCO2/kWh
13002	9609	3.0	0.69393 €/kWh	263 gCO2/kWh
13897	10251	4.0	0.69393 €/kWh	263 gCO2/kWh
15573	11452	4.0	0.69393 €/kWh	263 gCO2/kWh
8368	6289	2.0	0.69393 €/kWh	263 gCO2/kWh
141984	**105255**	**38**		

Note

Editing the values initiates a recalculation of the Portal's reports and KPI values. If there is a lot of data, it may take a few minutes before the results of the calculations have been updated on the reports.

Note

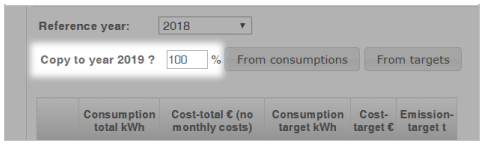
The targets for the setting year can be normalized by selecting the *Target normalized* check box. If the *Target normalized* check box has not been selected, the targets must be set without normalization.

Setting consumption targets based on data from the reference year

Setting the target percentage

Enter the consumption targets for the next year as a percentage of the realized consumption of the reference year in

the *Copy to year* field.



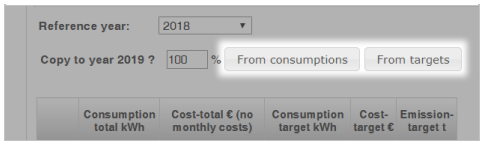
Example

If you want to reduce the consumption target for 2019 to 90 per cent of the realized consumption during 2018, enter the value 90 to the field *Copy to year*.

Selecting the target reference point

By clicking the *From consumptions* button, the system calculates consumption, price and CO2 emission targets by using the realized consumptions of the reference year as the basis for calculation.

By clicking the *From targets* button, the system calculates consumption, price and CO2 emission targets by using the targets of the reference year.

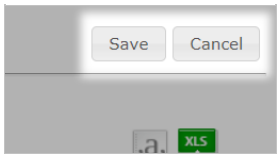


The new targets are updated in the table on the right.

Saving the target

Save and update the targets for the building by clicking the *Save* button.

You can clear the selections you have made by clicking the *Cancel* button.



If unsaved changes have been made on the page, the following text is shown.

Viewing the targets in different file formats

Viewing the targets as a text file

You can download the targets for the selected setting year as a text file by clicking the *Download txt-file* button ( ).

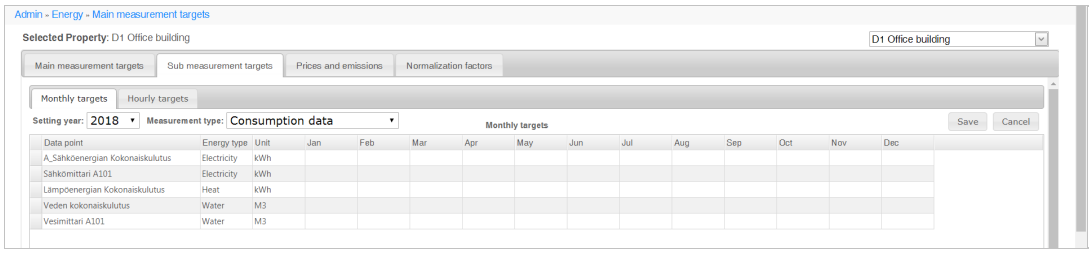
Viewing the targets as a spreadsheet

You can download the targets for the selected setting year as an XLS file suitable for spreadsheet programs by clicking the *Download XLS-file* button ( ).

Sub measurement targets

Monthly targets

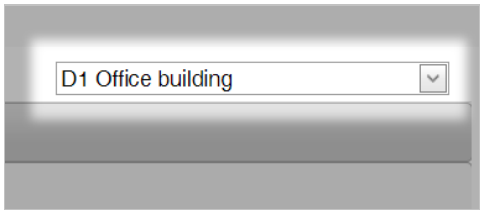
The *Monthly targets* tool can be used to set monthly targets for sub-measurements. The targets are used in comparing the results on the tenant terminals, for example.



Setting monthly targets

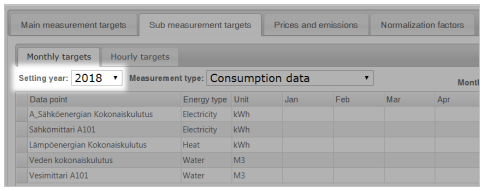
Selecting the building

Select the building, for which you want to set consumption targets from the drop-down menu in the top right corner of the page.



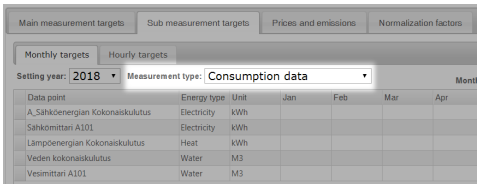
Selecting the year

Select the year, for which you want to set consumption targets from the *Setting year* drop-down menu.



Selecting the data points

Select the data points, for which you want to set consumption targets from the *Measurement type* drop-down menu.

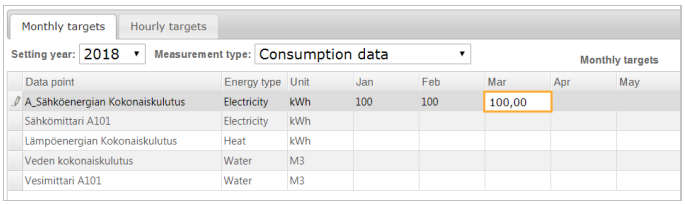


Note

The data points are filtered in the *Monthly targets* table based on the measurement type selected.

Setting targets

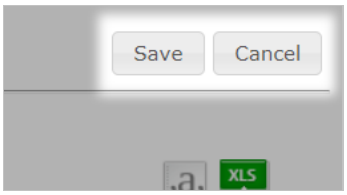
You can edit the desired cell in the table by clicking it. You can add the desired targets directly into the table cells.



Saving targets

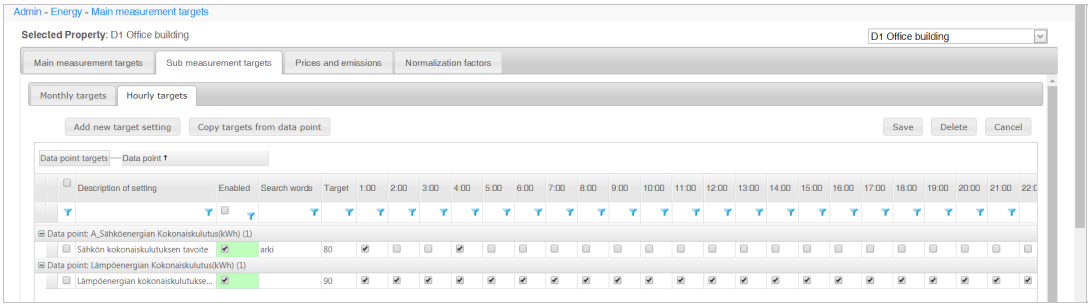
Save and update the targets of a building by clicking the *Save* button

You can clear the selections you have made by clicking the *Cancel* button.



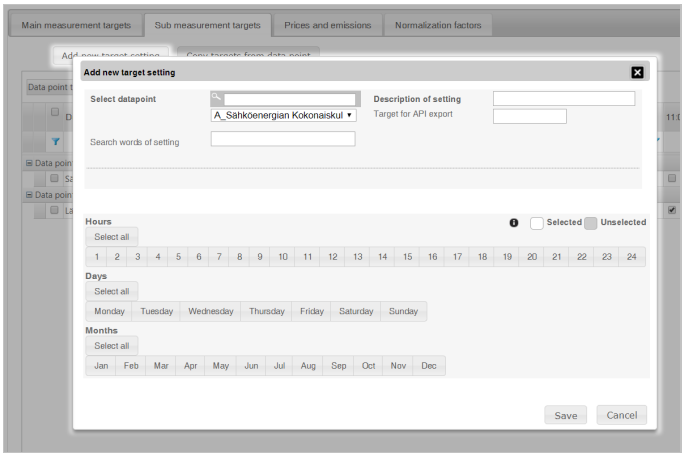
Hourly targets

The *Hourly targets* tool can be used to set hourly targets for sub-measurements. New targets can be set for the sub-measurement, or the targets can be copied from another sub-measurement.



Adding a new target for a sub-measurement

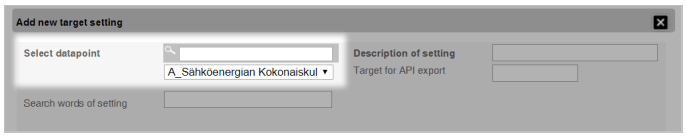
Add a new target setting by clicking the *Add new target setting* button. This opens a pop-up window for entering the information on the new target setting.



Selecting the data point

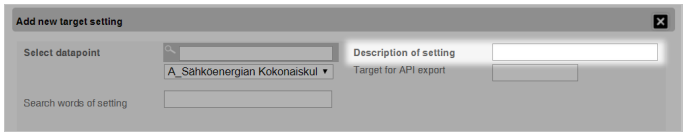
Select the data point, for which the new target setting is set from the *Select data point* drop-down menu.

If there are many data points, you can also use the search field for searching data points based on the search word.



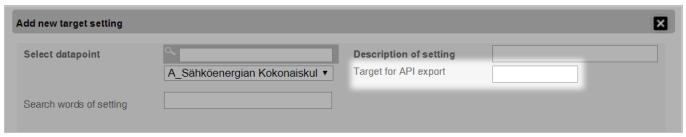
Adding a description

You can add a description for the target setting in the *Description of setting* field. For example: *Total heat consumption (kWh)*.



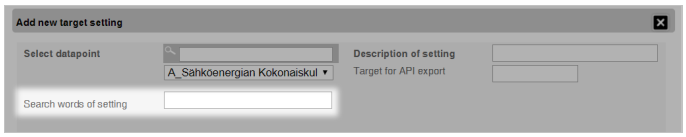
Adding a target value

Add a target value into the *Target for API export* field.



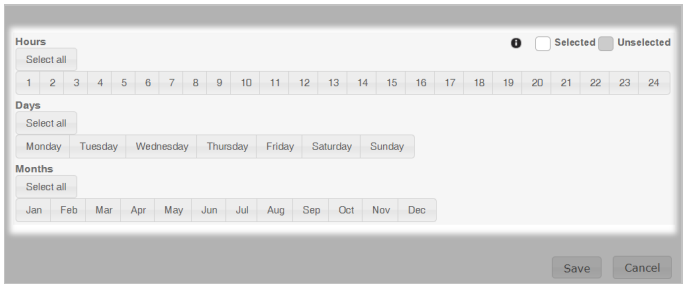
Adding a search word

You can add a search word for the target setting into the *Search words of setting* field; it can be used to find the setting when selecting a data point.



Selecting the target's period of validity

Add a period of validity for the target with the *Hours*, *Days* and *Months* selections. The new target setting is updated for all selected time values concerning the selected data point.



Note

You can select all hours by clicking the *Select all* button.

You can select all days by clicking the *Select all* button.

You can select all months by clicking the *Select all* button.

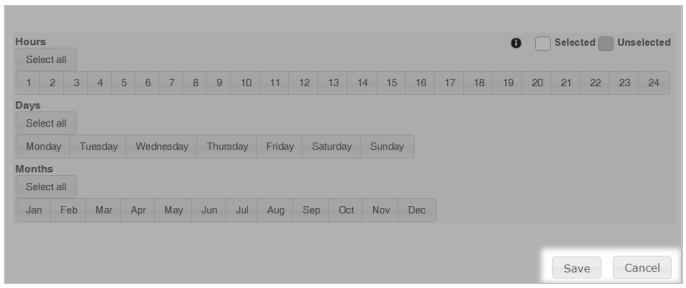
Note

The selected time values are shown on a white background, while the time values that have not been selected are shown on a gray background.

Saving the new target setting

Save and update the targets by clicking the *Save* button.

You can clear the selections you have made by clicking the *Cancel* button, after which you can close the pop-up window.

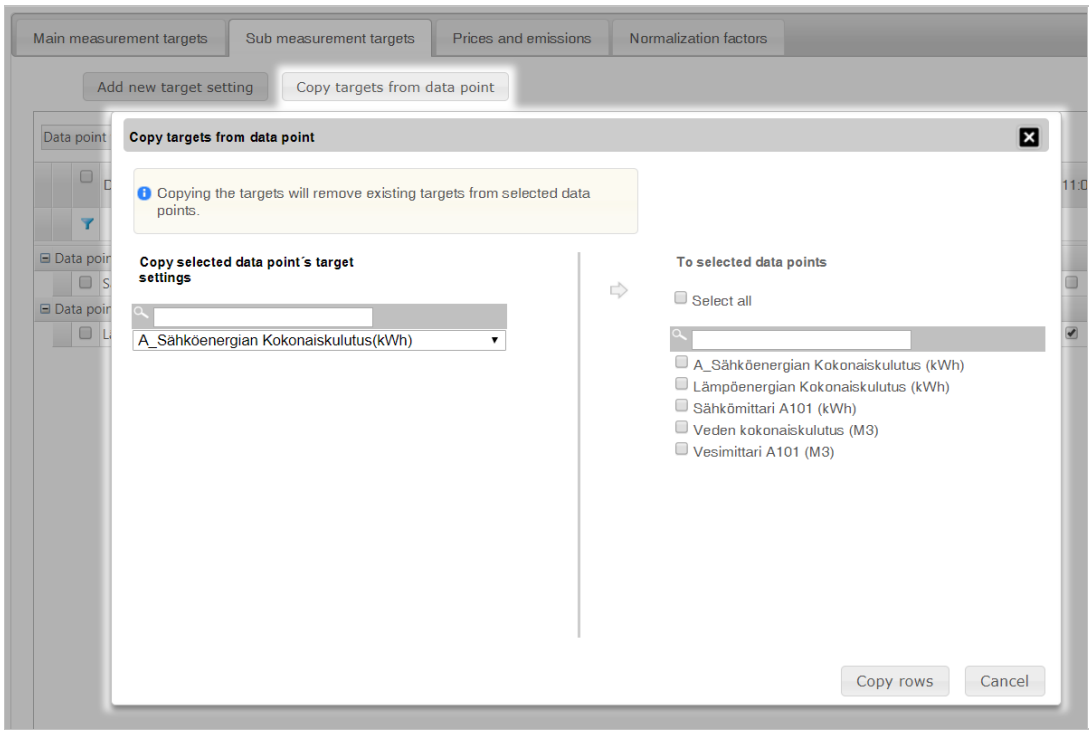


Copying the targets from another sub-measurement

You can copy the targets from another sub-measurement by clicking the *Copy targets from data point* button. This opens a pop-up window for selecting the settings for copying.

Note

Copying removes all existing targets from the sub-measurement.

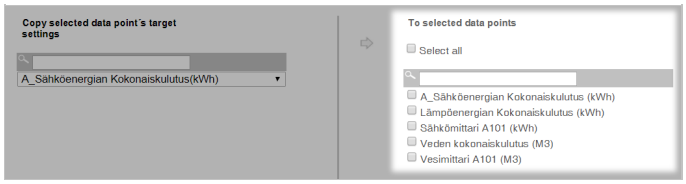


Selecting the data point to be copied

Select the sub-measurement whose targets you want to copy from the drop-down menu.

Selecting the data points to which targets will be copied

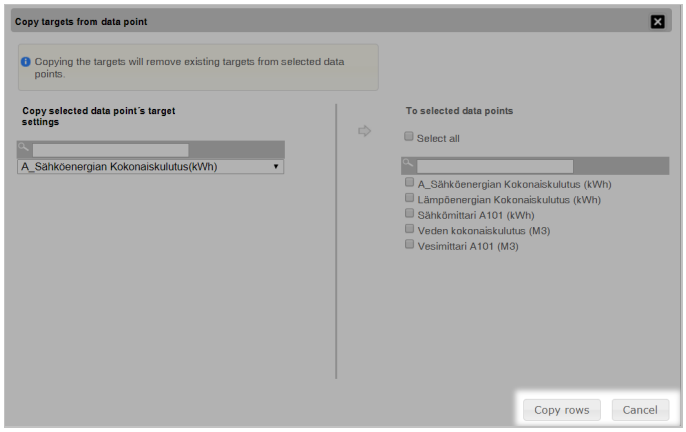
Select one or more data points, for which you want to set targets by using the data point check box.



Saving the copied targets

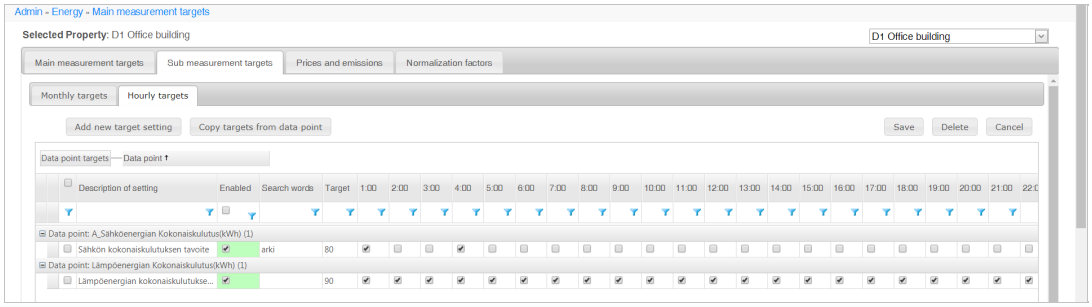
Save and update the copied targets by clicking the *Copy rows* button.

You can clear the selections you have made by clicking the *Cancel* button, after which you can close the pop-up window.



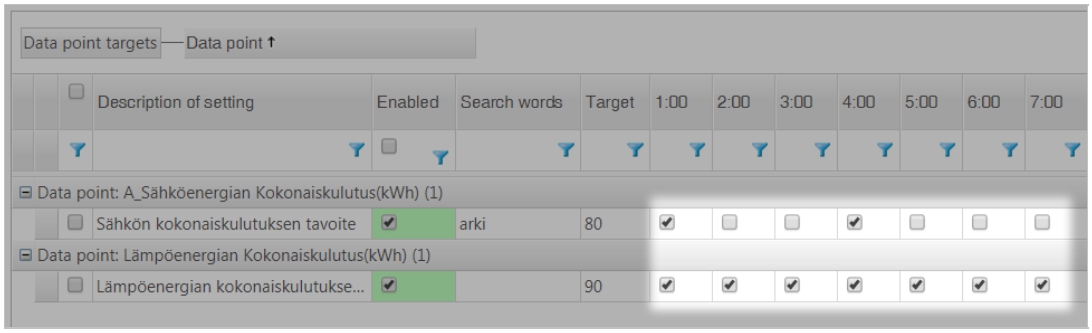
Viewing the targets

You can study the added hourly targets in the table updated on the *Hourly targets* page.



Changing the target schedules

Each hourly target row added has check boxes in the columns for hours, days and months. You can use the check boxes to select when the target is in force. This makes it possible to take the hours of the day and the changes of seasons into account.

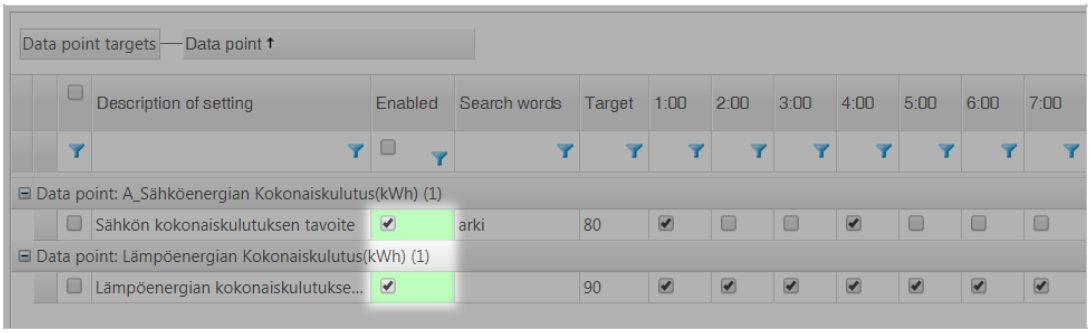


Note

Remember to save the changes to the table by clicking the *Save* button after making changes. If changes have been made, but they have not been saved yet, a pen icon (✎) is shown on the left side of the changed row.

Disabling the target

An hourly target can be enabled or disabled by selecting the check box in the *Enabled* column.



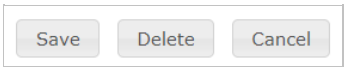
Note

The *Enabled* column cell of enabled hourly targets is marked with green, while the corresponding cell of disabled hourly targets is marked with orange.

Saving changes

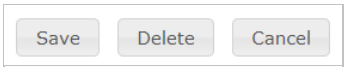
Save the changes to the table by clicking the *Save* button. If changes have been made, but they have not been saved yet, a pen icon (✎) is shown on the left side of the changed row.

You can clear the selections you have made by clicking the *Cancel* button, after which you can close the pop-up window.



Deleting targets

You can delete an hourly goal completely by clicking the *Delete* button. You can select the targets to be deleted with the check box on the left side of the data point.

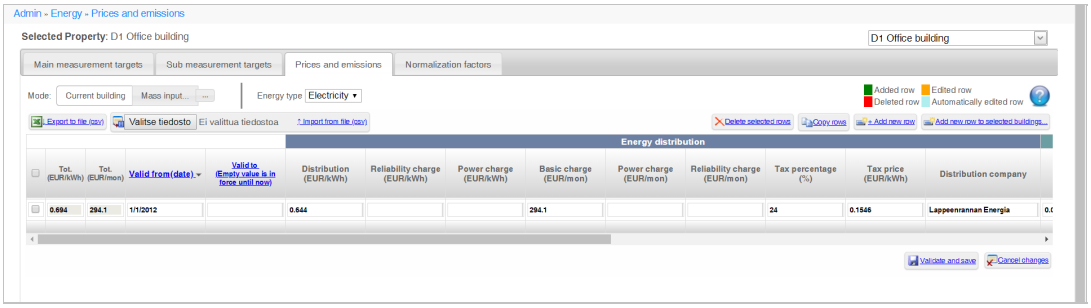


After you have selected the hourly targets to be deleted and clicked the *Delete* button, you need to confirm the deletion by clicking the *OK* button in the pop-up window.

Prices and emissions

Managing price and emission data

The Prices and emissions page is for managing and creating data on price and emission factors.



The interface on the page has two different modes:

1. Editing the price and emission data for the current building
2. Entering price and emission settings for mass input

Both modes allow you to add new price and emission settings, but you can only edit existing settings in *Current building* mode. Settings are grouped by energy type, and each energy type has different price and emission settings. The energy types include water.

The price and emission settings are divided into prices per unit and prices per month. You can also enter a tax percentage for prices, which is used to calculate the tax price. The table of price and emission settings automatically calculates monthly total sums per unit of energy type (such as kWh or m3) for each row of settings.

The price and emission settings also allow editing of data about the origin of the energy. This includes the CO2 emission factor and how the energy production on each row is divided into renewable and non-renewable energy sources.

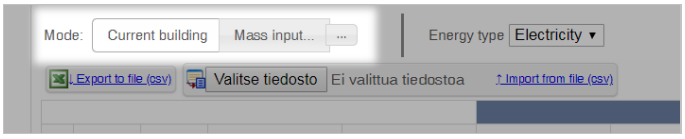
Example

Electricity may be produced 95% with water power and 5% with nuclear power.

Note

The interface is available in English, Finnish and Swedish Please note that the different languages use different date and number formats.

Modes of the Prices and emissions page



Current building mode

In *Current building* mode, you can view, edit or delete the prices entered for the current building as well as add new prices.

You can also import data from a CSV (Comma-separated values) file, which is compatible with spreadsheet software.

You can also export price and emission data to a CSV file, edit it with spreadsheet software and import it back to Price and emission settings.

Mass input mode

The mode's functions are similar to the *Current building* mode except that you can only add new rows of price and emission settings. The mode allows entry of new setting data for several buildings at a time, so that you can enter data for 100 buildings, for example, in a few minutes. However, it is recommended to enter price settings one at a time, which also allows you to analyze and proportion the prices to the old settings.

Changing prices for a single building

You can freely edit price and emission settings and delete rows or add new ones. The data is not saved to the database until you select the *Validate and save* button. The data validation process always goes over the entered prices and checks that their dates do not overlap. The result of the validation process is shown to the user, who must accept them before the data is saved permanently.

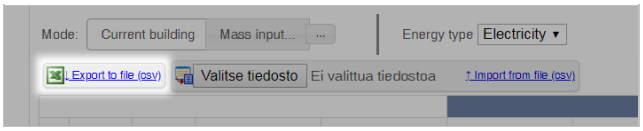
You can cancel the changes with the *Cancel changes* button.

Once the data has been saved, the recalculation of the building's cost data starts about 10 minutes after the price changes. Depending on the timespan of the edited prices (for example, if data for several years has been edited), the completion of the calculations may take hours.

Basic functions

Exporting price and emission settings

Export price and emission settings to a CSV file by selecting the *Export to file (csv)* button.



Note

If the default download location has not been specified in your browser, select the folder where to download the file.

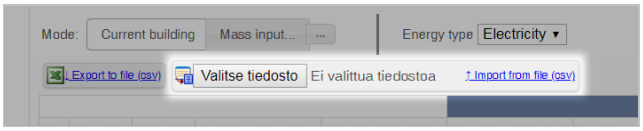
You can edit the file in using spreadsheet software (such as Excel) and import the edited price and emission settings back.

Note

Please note that prices imported from a CSV file are entirely new rows. If necessary, delete the old rows in the interface.

Importing price settings from file

Select the file to import with the *Choose file* button. Import the price and emission settings of the selected file as a CSV file by selecting the *Import from file (csv)* button.



Note

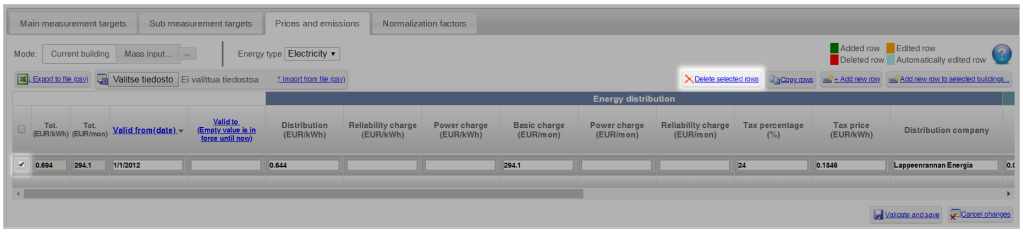
The file is specific to the energy type and language. If you exported a file in English and try to import edited data in Finnish, the import will fail. The same applies to files created for a different energy type.

Note

You can import up to 100 rows at a time.

Deleting price settings

Select the rows to be deleted by ticking the boxes on the left and select the *Delete selected rows* button. Confirm the deletion in the popup.

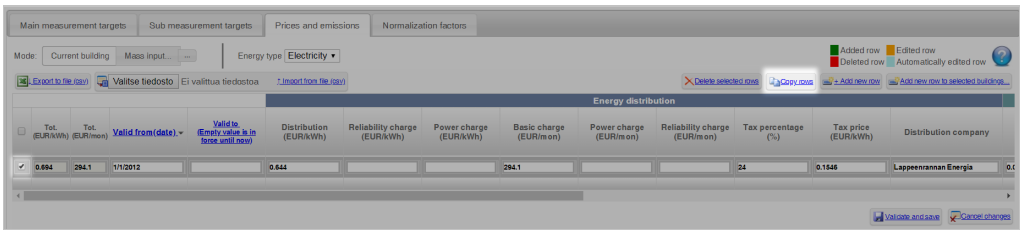


Note

The rows to be deleted will show with red background. The data is not permanently deleted until you select *Validate and save*.

Copying rows

Select the rows to be copied by ticking the boxes on the left and select the *Copy rows*button.



Note

The copied rows will show with green background. The copied rows are not permanently saved until you select *Validate and save*.

Add new row

Select the *Add new row* button. A new row is added to the table, with green background.

Note

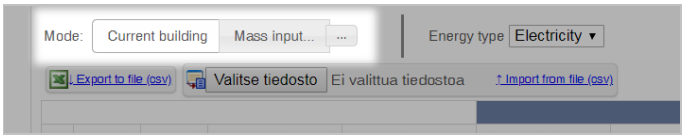
The new rows are not saved permanently until you select *Validate and save*.

Confirming and saving data

In order to save changes, you must remember to save them in the database. Select the *Save* button once you are done making changes to price and emission settings.

Entering price and emission settings for several buildings

Activate the Mass input mode of price and emission settings with the *Mass input* button.



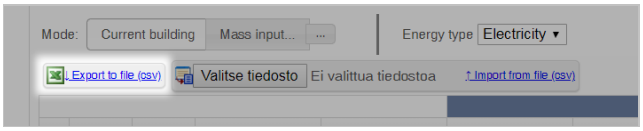
Note

The interface also includes a *Add new row to selected buildings...*, which activates the mass input mode and adds a new price setting row for input.

Basic functions

Exporting price settings

Download price and emission settings as a CSV file by selecting the *Export to file (csv)* button.



Note

If the default download location has not been specified in your browser, select the folder where to download the file.

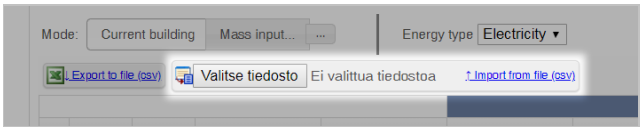
You can edit the file in using spreadsheet software (such as Excel) and import the edited price and emission settings back.

Note

Please note that prices imported from a CSV file are entirely new rows. If necessary, delete the old rows in the interface.

Importing price settings from file

Import the price and emission settings from a CSV file by selecting the *Import from file (csv)* button.



Note

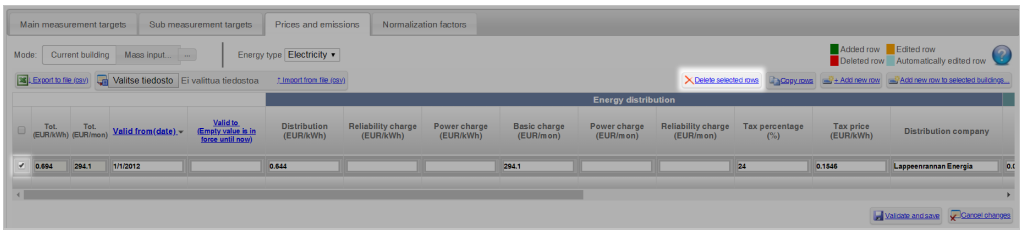
The file is specific to the energy type and language. If you exported a file in English and try to import edited data in Finnish, the import will fail. The same applies to files created for a different energy type.

Note

You can import up to 100 rows at a time.

Deleting price settings

Select the rows to be deleted by ticking the boxes on the left and select the *Delete selected rows* button. Confirm the deletion in the popup.

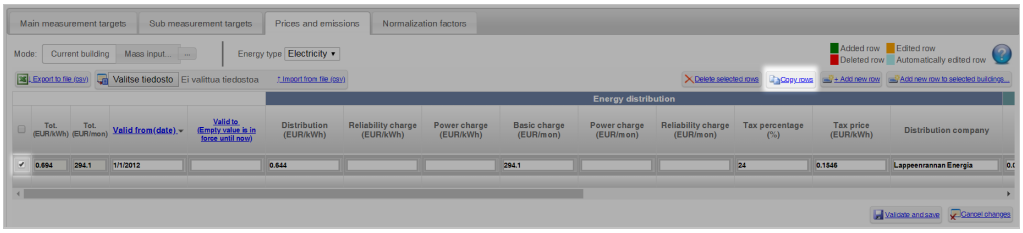


Note

Because all rows are new rows in the *Mass input* mode, deleting them will not affect any existing rows already in the system. Alternatively, you can cancel the changes, which removes the added rows from the table.

Copying rows

Select the rows to be copied by ticking the boxes on the left and select the *Copy rows*button.



Note

The copied rows will show with green background. The copied rows are not permanently saved until you select *Validate and save*.

Add new row to selected buildings

Select the *Add new row to selected buildings...* button. A new row is added to the table, with green background, and the *Building selection* window opens.

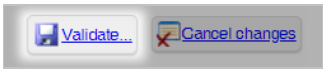
In the *Building selection* window, check all buildings that you want to add a new row of settings for.

Note

However, the selected buildings will not be approved until the data save with the *Validate...* button.

Confirming and saving data

In order to save changes, you must remember to save them in the database. Select the *Validate...* button once you are done making changes to price and emission settings.

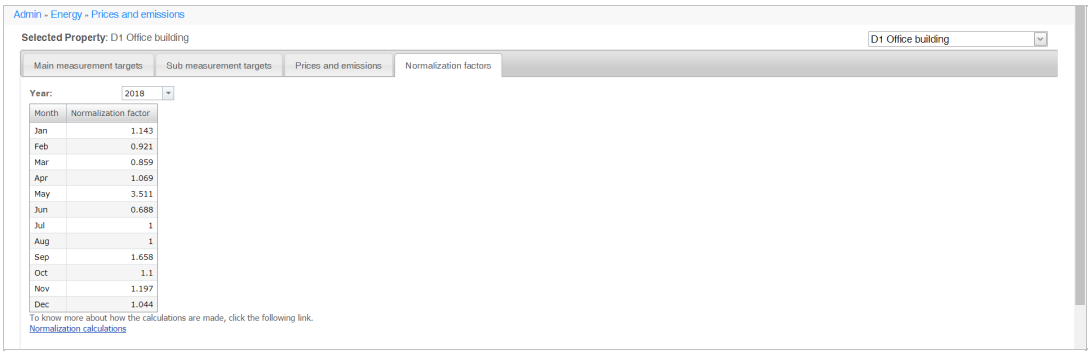


The price and emission settings are validated and a confirmation window appears so that you can confirm which buildings you want the mass input settings to apply to.

Once you have checked the buildings, select the *Save* button to transfer the price settings to the database.

Normalization factors

The year-specific normalization factors are presented on the *Normalization factors* page.



What is a normalization factor?

A normalization factor is a factor used to make heat consumption data comparable between different years and areas.

You can show the normalization factors for a specific year by selecting the desired year in the Year drop-down menu.
The monthly normalization factors of the selected year are updated on the *Normalization factors* page.

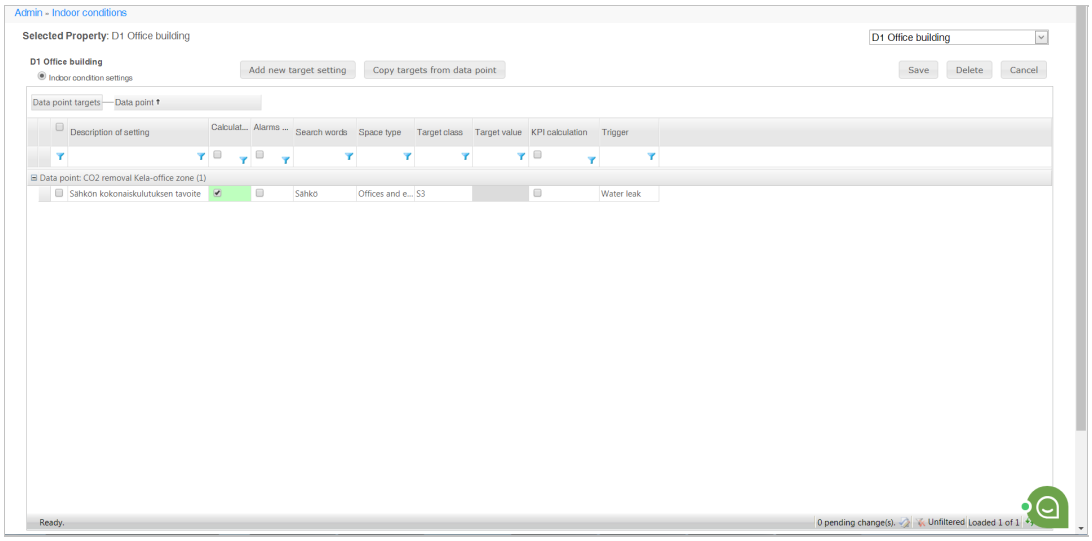
More information about normalization factors

You can find more information about the normalization factors used and how they are calculated by clicking the link Normalization calculations.

Indoor condition settings

On the Indoor condition settings page, you can view and adjust the default target settings for indoor conditions as well as alerts for deviations from the settings.

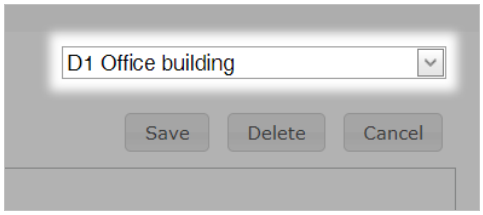
You can add new targets for sub-metering or copy targets from data point.



Selection of data

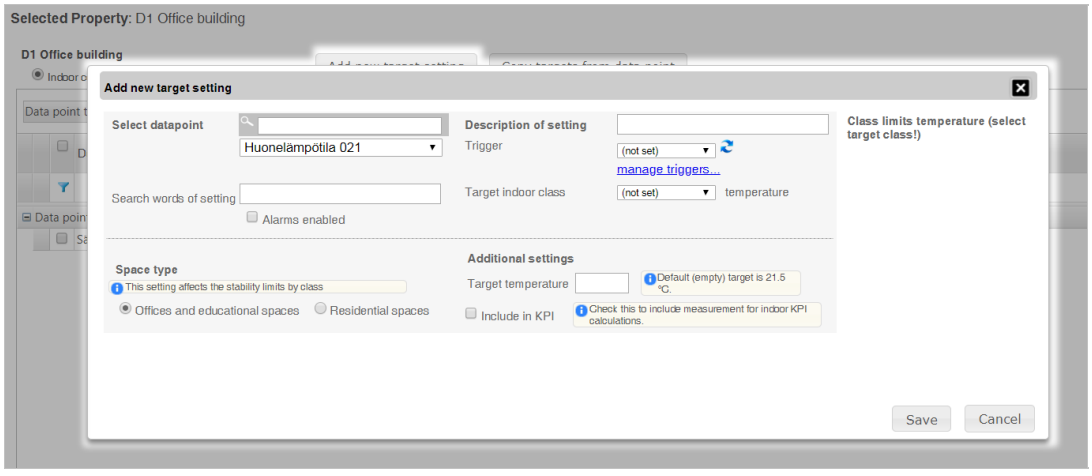
Selecting the building

Select the building in the drop-down menu on the top right corner.



Adding a new target for sub-metering

To add a new target, select the *Add new target setting* button. This opens a pop-up window for specifying data for the new target.

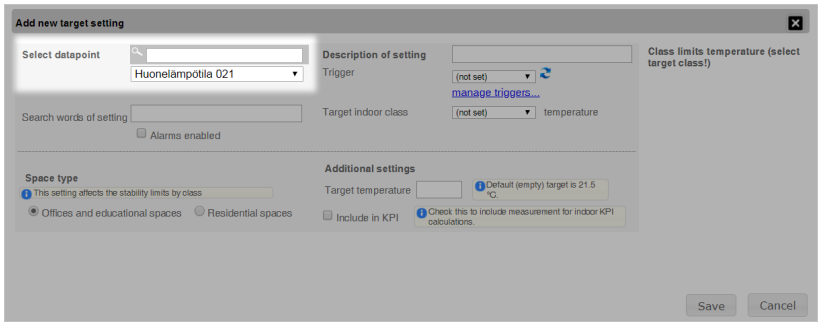


Note

More information connected to setting a target is provided on the right side of the *Add new target setting* window.

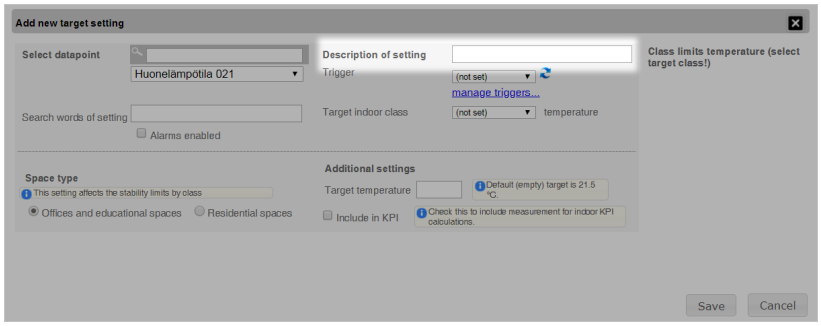
Selecting a data point

Select a data point for which you want to set a new target.



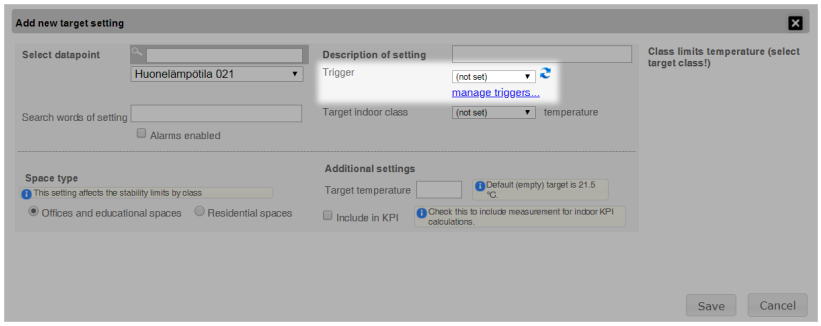
Adding a description

Add a description for the target in text format.



Selecting a trigger

Select a trigger from the *Trigger* drop-down menu or create a new one by selecting the *manage triggers* button below. The new trigger activates for use when you select the refresh icon next to the menu.



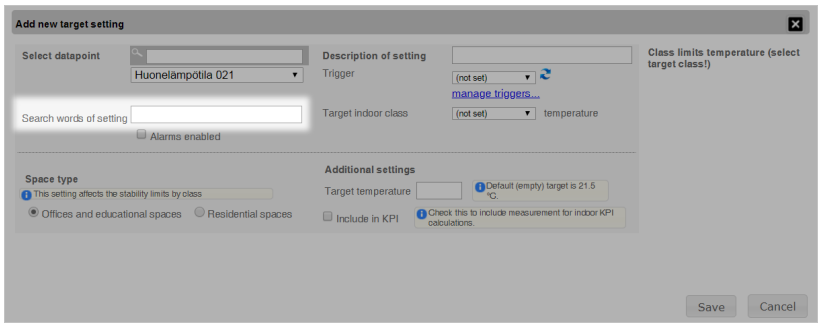
Note

The trigger defines when and under what conditions the target is valid. For example, in summer, air-conditioning consumption can be monitored only when the air-conditioning is on.

For more information about setting triggers, please consult the section Trigger management in this guide.

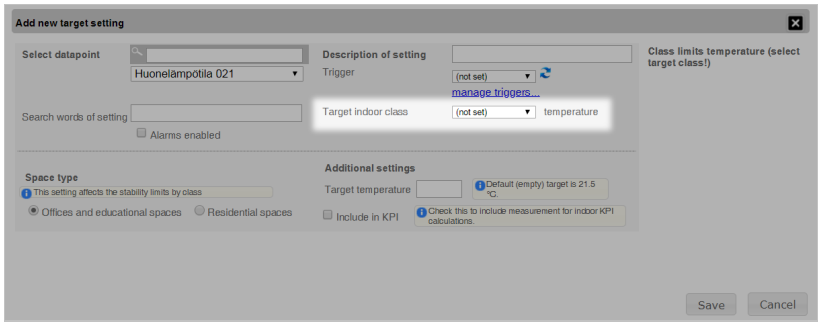
Adding a search word

Enter a search word that can be used to search for targets in the *Search words of setting* field.



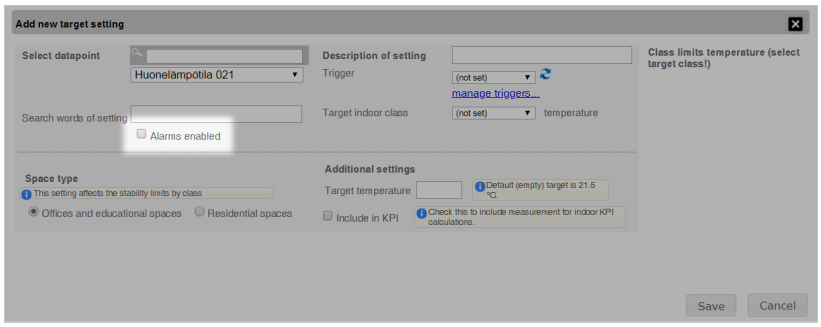
Selecting a target indoor class

Select the target indoor class in the *Target indoor class* drop-down menu.



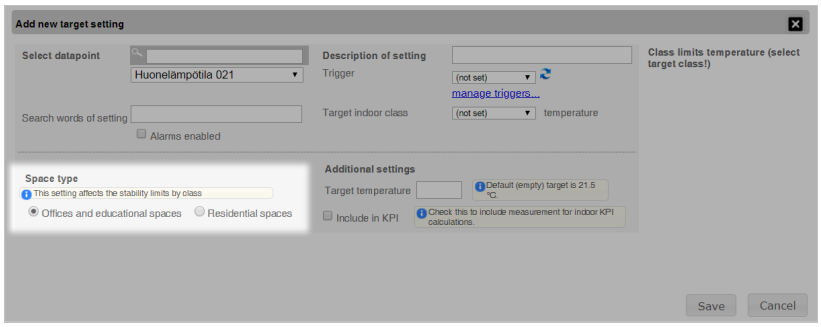
Enabling alarms

Enable alarms by ticking the *Alarms enabled* check box.



Selecting a space type

Select the desired space type in *Space type* settings.

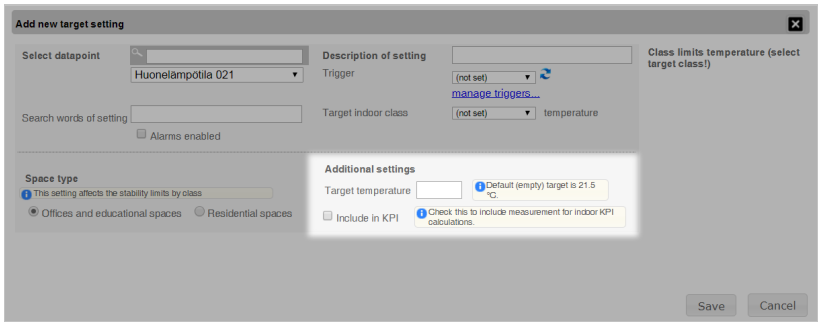


Note

The *Space type* setting affects the stability limits by class.

Including measurements in KPI calculations

In the *Additional settings* section, you can specify whether measurements are included in KPI calculations.

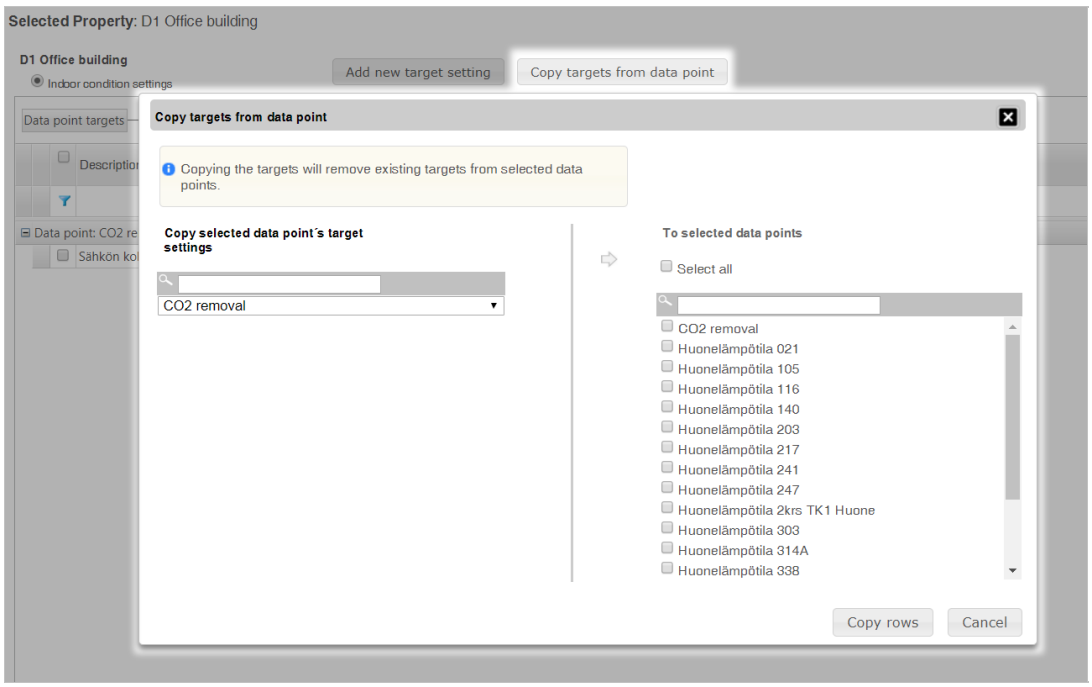


Note

If you want the results for the data point in question to be considered in KPI calculations for the whole building's indoor conditions, this box must be checked.

Copying targets from another sub-metering

To copy targets from another sub-metering, select the *Copy targets from data point* button. This opens a pop-up window where you can copy targets from one sub-metering to another.

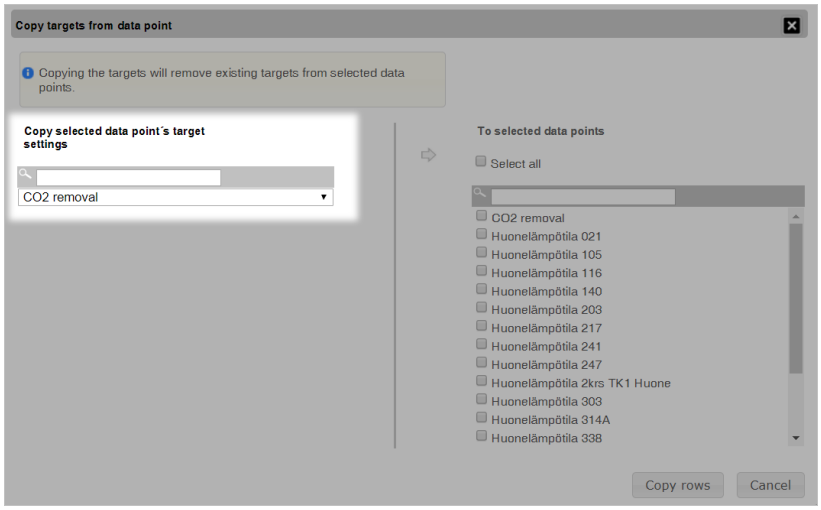


Note

Copying the targets will remove all targets previously set for sub-metering.

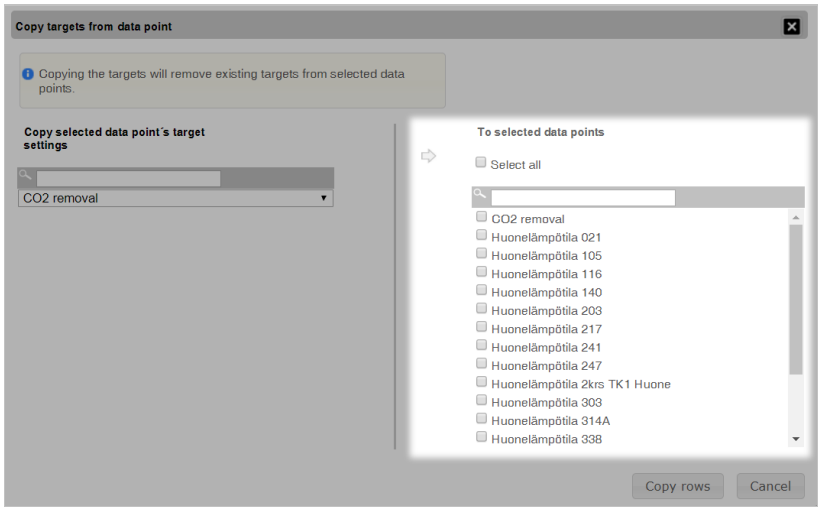
Selecting a sub-metering to copy

Select the sub-metering whose targets you want to copy.



Selecting sub-meterings

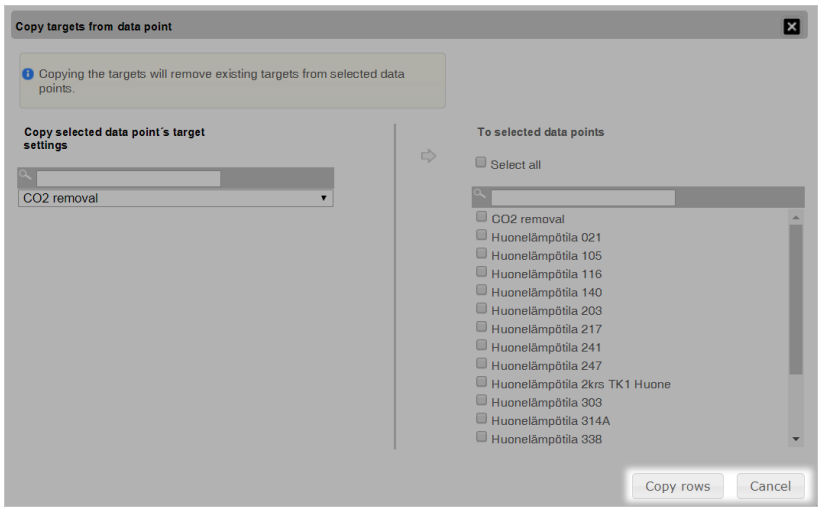
Select one or more sub-metering for which you want to set targets.



Copying sub-meterings

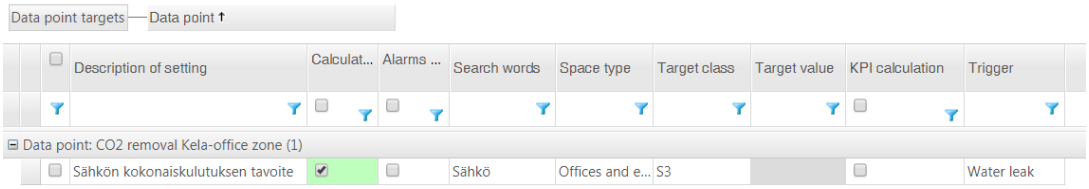
Copy sub-meterings by selecting the *Copy rows* button. The targets are saved for the sub-meterings selected.

You can erase the entered data and close the pop-up window with the *Cancel* button.



Viewing targets

You can view and edit the data of the targets set in the table that updates itself on the page.



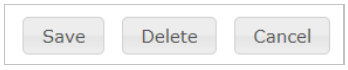
Huomio

Taulukkoon tehdyt muutokset tulee muistaa tallentaa *Tallenna*-painikkeella muutosten jälkeen. Jos muutoksia on tehty, mutta niitä ei ole vielä tallennettu, muutetun rivin vasemmassa reunassa näkyy kynä-ikoni ( ).

Saving changes

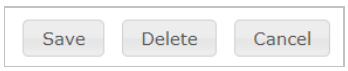
Save changes made to the table with the *Save* button. If changes have been made but not saved yet, a pencil icon shows on the left side of the changed row ( ).

You can clear the changes made by selecting the *Cancel* button; you can then close the pop-up window.



Deleting targets

You can delete an hourly target with the *Delete* button. You can select the targets to delete with the check boxes on the left side of each data point.

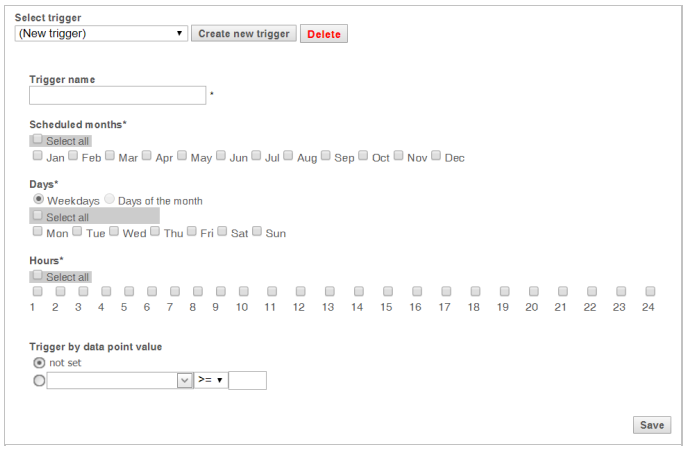


After selecting the hourly targets to delete and clicking on the *Delete* button, confirm the deletion by selecting *OK* in the pop-up window.

Trigger management

Trigger management opens in its own tab, which you can access through the *manage triggers* link.

You can edit, delete or create new triggers on the tab.



Creating a new trigger

Create a new trigger by selecting the *Create new trigger* button. Next, add a name for the new trigger, a validity period and a condition, if any.

After adding the information, save the new trigger by selecting the *Save* button.

Editing trigger information

Select the desired trigger in the *Select trigger* drop-down menu. This will update the page with the trigger's information, making it possible to edit it.

Save the changes by selecting the *Save* button.

Deleting a trigger

Select the desired trigger in the *Select trigger* drop-down menu. This updates the page with the trigger's information.

Delete the trigger by selecting the *Delete* button.

Save the changes by selecting the *Save* button.

Defining trigger validity

Use the *Months*, *Days* and *Hours* settings to specify when the trigger is valid.

Specify conditions for when the trigger is valid in the *Trigger by data point value* section.

For example, you can specify that the air conditioning must be on. You can skip specifying a condition by selecting *Not set*.