Overview of the results of the household CHR34 Couple under 30 years, one at work, one at home 0

Calculation Time
Freitag, 1. Januar 2016 - Sonntag, 1. Januar 2017

Energy Intensity: Random

Seed 5135

LoadProfileGenerator 5.8.0.16019

by Noah Pflugradt

http://www.loadprofilegenerator.de

Rendering date:16.12.2016 09:22:20

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Totals

Totals for each Loadtype

Load Type	Value	Unit
Cold Water	32486.98	L
Electricity	3744.75	kWh
Warm Water	82480.00	L

Totals for each Loadtype per Day

Load Type	Value	Unit
Cold Water	88.76	L
Electricity	10.23	kWh
Warm Water	225.36	L

Minimum and Maximum for each Loadtype

Household	Minimum	Maximum	Unit
Cold Water	0.00	19.64	L/Min
Electricity	-37.44	10117.32	Watt
Warm Water	0.00	20.00	L/Min

Totals for each Loadtype per Person

Load Type	Value	Unit
Cold Water	16243.49	L
Electricity	1872.38	kWh

Warm Water	41240.00	L

Totals for each Loadtype per Person per Day

Load Type	Value	Unit
Cold Water	44.38	L
Electricity	5.12	kWh
Warm Water	112.68	L

Persons

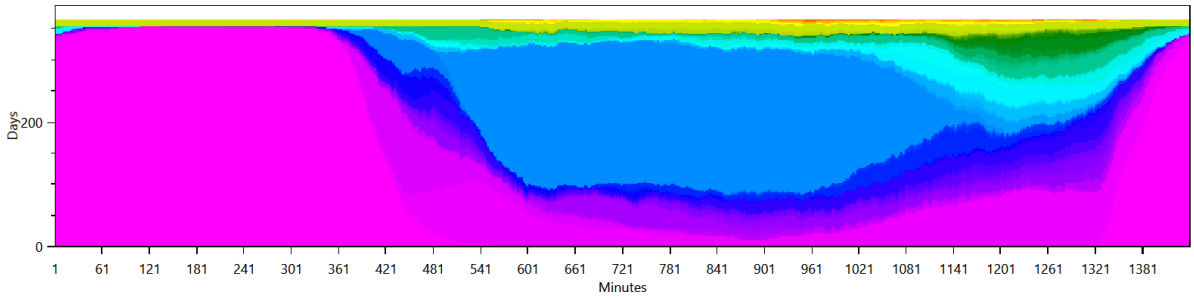
- HH0
    - CHR34 Julia (25/Female)(25/Female)
    - CHR34 Romeo (26/Male)(26/Male)

Activity Frequency Charts

This is made from the files starting with: ActivityFrequenciesPerMinute

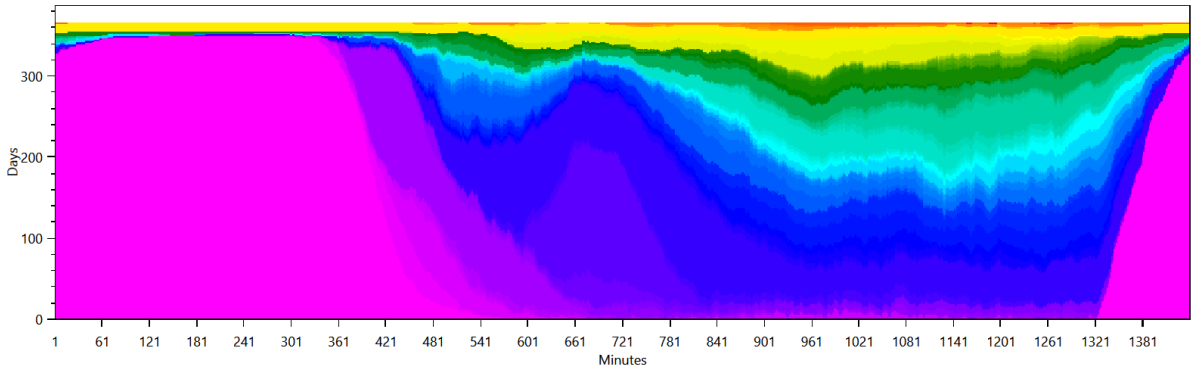
These charts show an ordered distribution of times of the activities of each person.This helps with judging quickly if a person is sleeping correctly and if they are going to work regularly.

HH0 - CHR34 Julia (25 Female)



sleep bed 02 (08 h) use the laptop for Internet, Movie, Music, News (2 h) eat breakfast (1 h) go to the toilet listen to music on hifi (2 h)
take a nap use the laptop (1 h) play Wii watch a movie for 1 h 30 min with home cinema system
take a shower with hair washing (women) (5 min hair drying) play board games (1 h) fry two eggs and eat them with toast use the laptop (1.5 h)
paint a picture get ready in the morning (women) microwave frozen meal and eat it cuddle and sleep (take a nap)
take a shower without hair washing (women) play a puzzle game watch TV (1 h) heat up leftovers watch a movie for 1 h 30 min
eat a cooked meal (interrupting) (eat breakfast (1 h)) work at the office from 8:00 (9 h) make roulades and eat them
take a shower with hair washing (women) (20 min hair drying) cook food with steam cooker and eat it
watch TV with someone (watch a movie for 1 h 30 min with home cinema system) cook pasta and eat it visit the theater take a shower with electric air heater
listen to music on compact hifi (2 h) watch TV with someone (watch a movie for 2 h) cook a sunday feast with extractor hood and eat it
eat a cooked meal (interrupting) (make soup) watch TV with someone (watch a movie for 1 h 30 min) watch a movie for 2 h with home cinema system
cook food with rice and eat it watch TV with someone (watch a movie for 2 h with home cinema system) make custom pizza and eat it
eat a cooked meal (interrupting) (make custom pizza and eat it) eat a cooked meal (interrupting) (cook food with a deep fryer and eat it)
make mashed potatoes and eat them make fondue and eat it watch TV with someone (watch TV (1 h)) cook food with a deep fryer and eat it
make frozen pizza and eat it join Wii gaming (play Wii) make soup watch TV with someone (watch sports on TV with SAT Reciever (2 h))
eat a cooked meal (interrupting) (make roulades and eat them) eat a cooked meal (interrupting) (cook food with rice and eat it)
join watching a movie in the home cinema (watch a movie for 2 h with home cinema system) eat a cooked meal (interrupting) (heat up leftovers)
eat a cooked meal (interrupting) (cook pasta and eat it) relax in the garden taking a vacation bake a cake
eat a cooked meal (interrupting) (cook food with steam cooker and eat it) relax in the garden 2 make and drink tea (15 min) watch a movie for 2 h
read a newspaper for 30min read a magazine read a book on the couch only 9:00 to 22:00
join watching a movie in the home cinema (watch a movie for 1 h 30 min with home cinema system) watch TV with someone (watch the news)
eat a cooked meal (interrupting) (make mashed potatoes and eat them) watch sports on TV with SAT Reciever (2 h) take nap on the weekend (2 h)
read a book on the couch all the time eat a cooked meal (interrupting) (make frozen pizza and eat it)
eat a cooked meal (interrupting) (cook a sunday feast with extractor hood and eat it) watch the news eat a cooked meal (interrupting) (make fondue and eat it)

HH0 - CHR34 Romeo (26 Male)



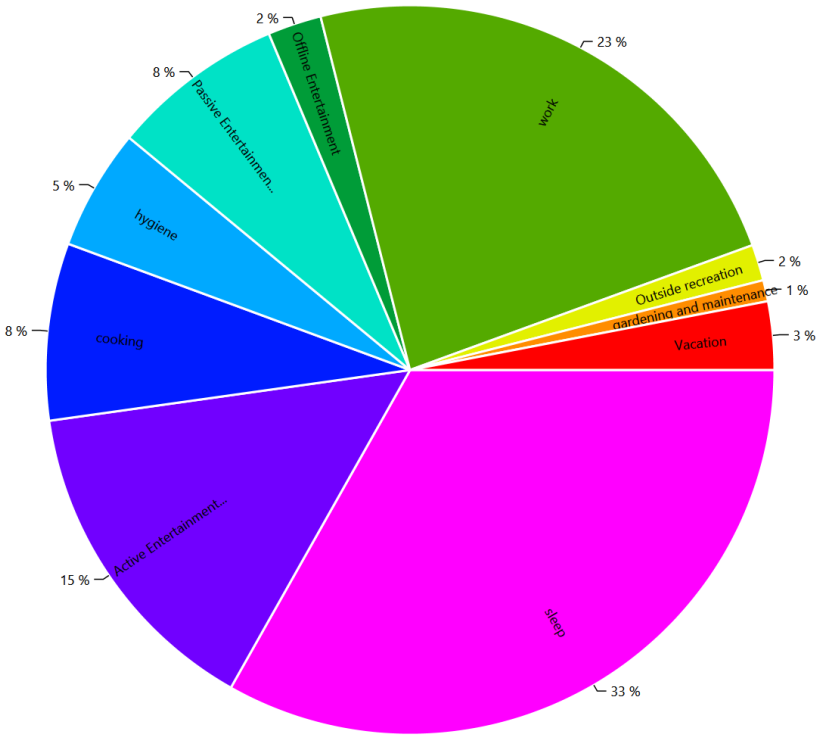
sleep bed 08 (08 h) eat a cooked meal (interrupting) (eat breakfast (1 h)) take a shower (men) go to the toilet do laundry at 30°C (by variable)
eat breakfast (1 h) rest for 10 min play board games (1 h) hang up laundry outside take a nap clean the bath
use the laptop for Internet, Movie, Music, News (2 h) bake a cake play a puzzle game paint a picture play Wii
watch a movie for 1 h 30 min with home cinema system make roulades and eat them get ready in the morning (men)
go shopping for food in the supermarket (1.5 h) watch sports on TV with SAT Reciever (2 h) watch a movie for 1 h 30 min make soup watch TV (1 h)
run the dishwasher (triggered) watch the news watch a movie for 2 h heat up leftovers use the laptop (1.5 h) use the laptop (1 h)
listen to music on hifi (2 h) invite friends for coffee cook food with steam cooker and eat it visit the theater cook food with a deep fryer and eat it
cook food with rice and eat it fry two eggs and eat them with toast watch a movie for 2 h with home cinema system make frozen pizza and eat it
microwave frozen meal and eat it cook a sunday feast with extractor hood and eat it do laundry at 60°C (by variable) listen to music on compact hifi (2 h)
throw party vacuum the household cook pasta and eat it make custom pizza and eat it make fondue and eat it
eat a cooked meal (interrupting) (make fondue and eat it) join watching a movie in the home cinema (watch a movie for 2 h with home cinema system)
join watching a movie in the home cinema (watch a movie for 1 h 30 min with home cinema system) make mashed potatoes and eat them
eat a cooked meal (interrupting) (cook food with steam cooker and eat it) watch TV with someone (watch a movie for 2 h with home cinema system)
relax in the garden 2 relax in the garden eat a cooked meal (interrupting) (make roulades and eat them) taking a vacation
eat a cooked meal (interrupting) (heat up leftovers) join Wii gaming (play Wii) make and drink tea (15 min) read a newspaper for 30min
read a book on the couch only 9:00 to 22:00 read a magazine read a book on the couch all the time take nap on the weekend (2 h)
eat a cooked meal (interrupting) (make custom pizza and eat it) eat a cooked meal (interrupting) (make frozen pizza and eat it)
eat a cooked meal (interrupting) (cook food with a deep fryer and eat it) eat a cooked meal (interrupting) (make mashed potatoes and eat them)
eat a cooked meal (interrupting) (cook pasta and eat it)

Activity Distribution per Person

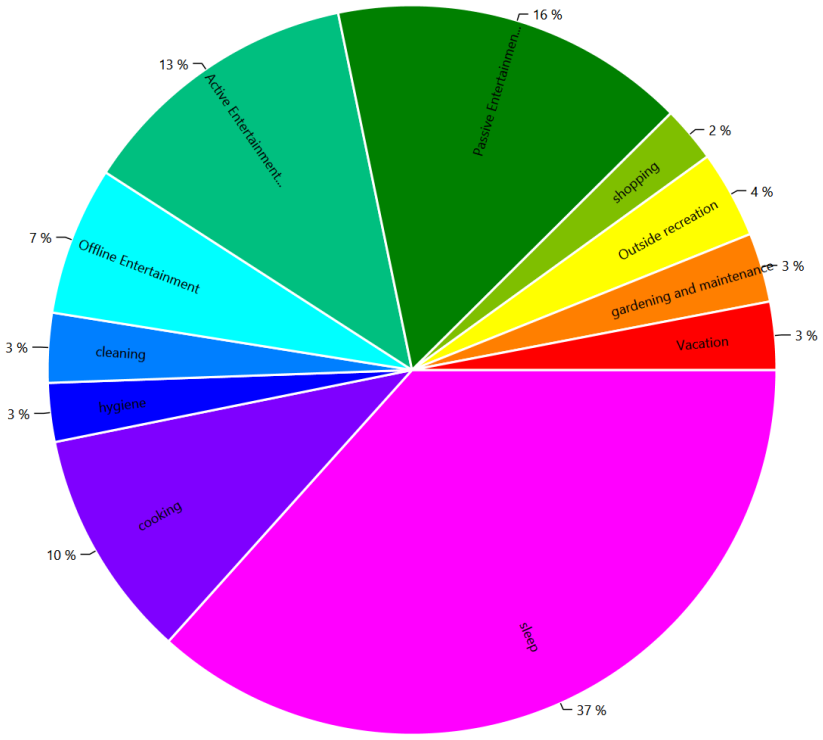
This is made from the files starting with: ActivityPercentage

This shows the distribution of the activities, grouped by the affordance AffordanceToCategories.

HH0 - CHR34 Julia (25 Female)



HH0 - CHR34 Romeo (26 Male)

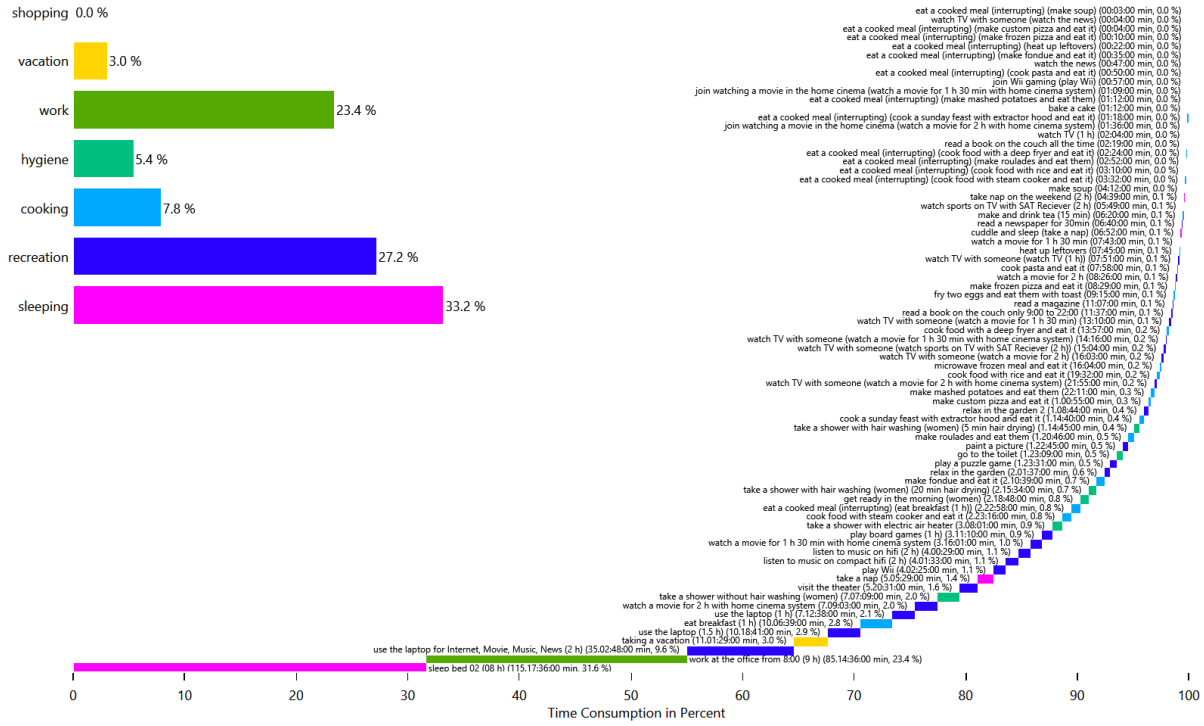


Time Use per Person per Affordance Per Person

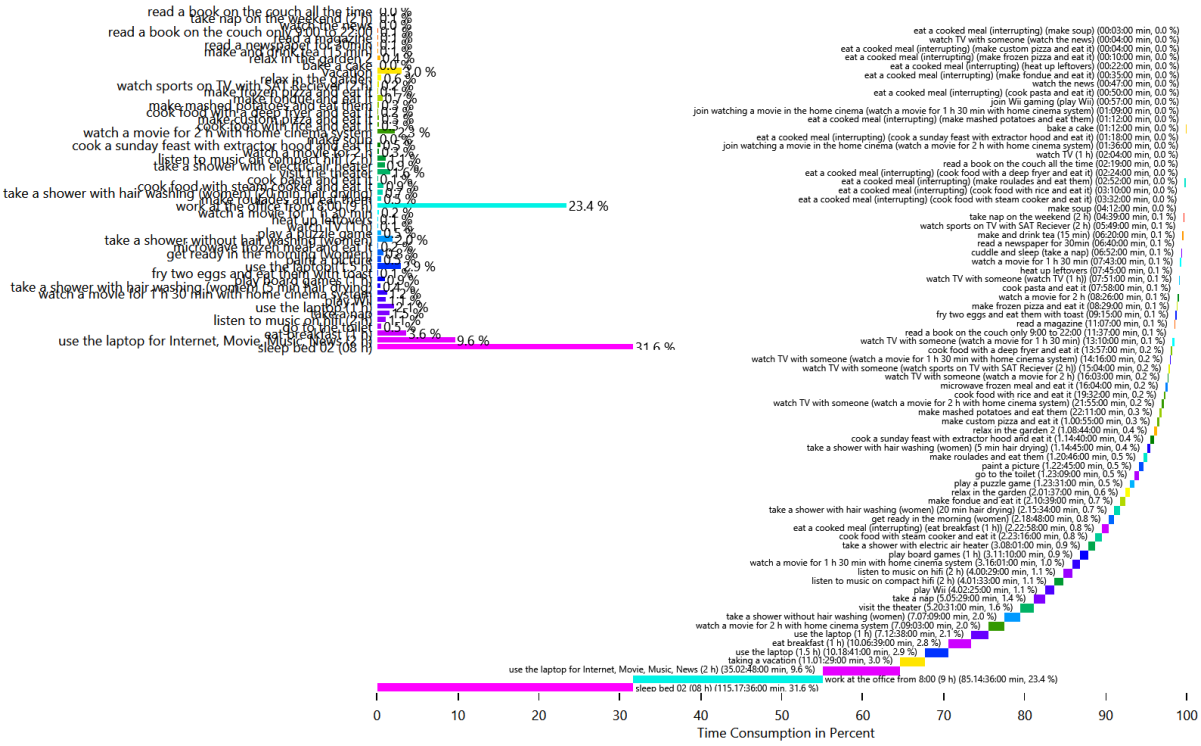
This is made from the files starting with: AffordanceTimeUse

These charts show how the people in the household use their time. This shows the individual affordances to help find problems in the household definition.

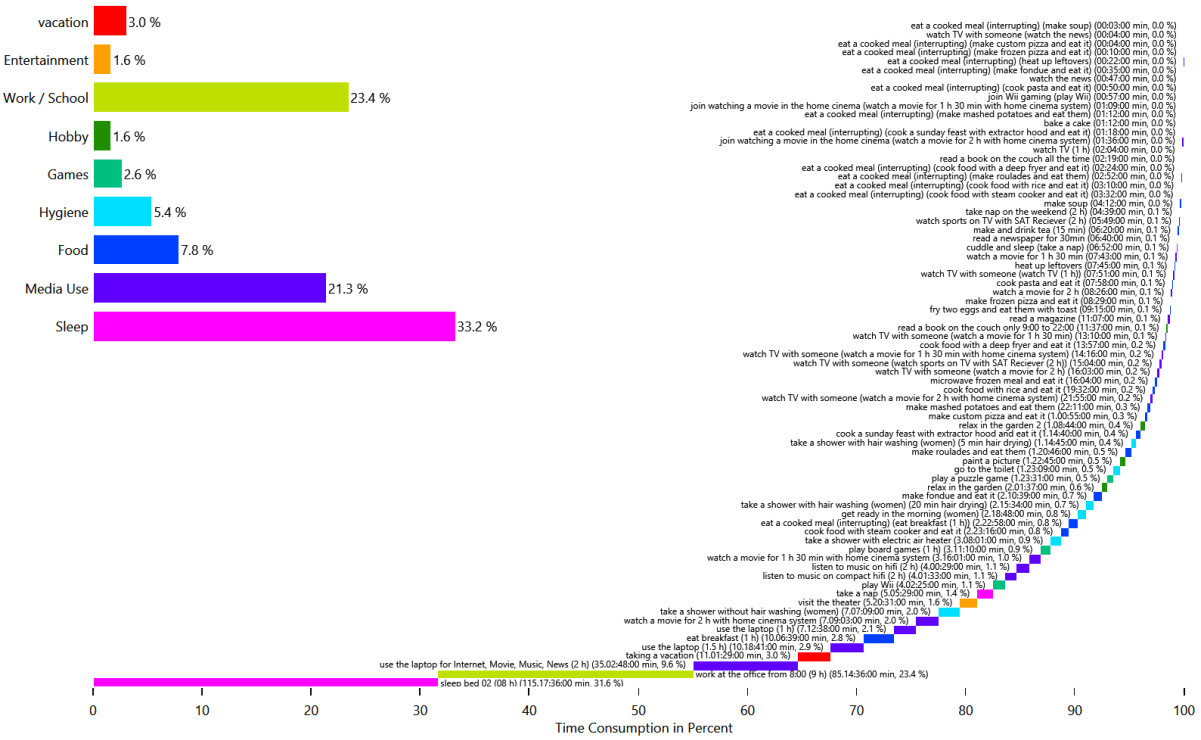
HH0 - CHR34 Julia (25 Female)



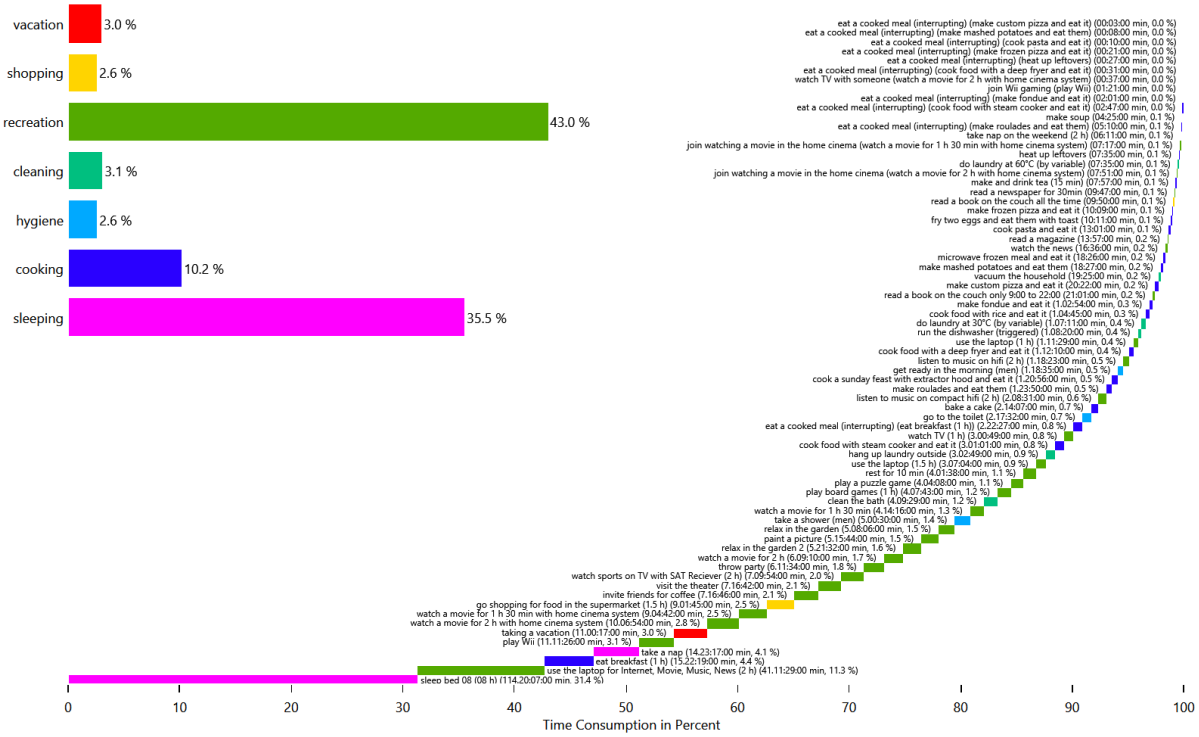
HH0 - CHR34 Julia (25 Female)



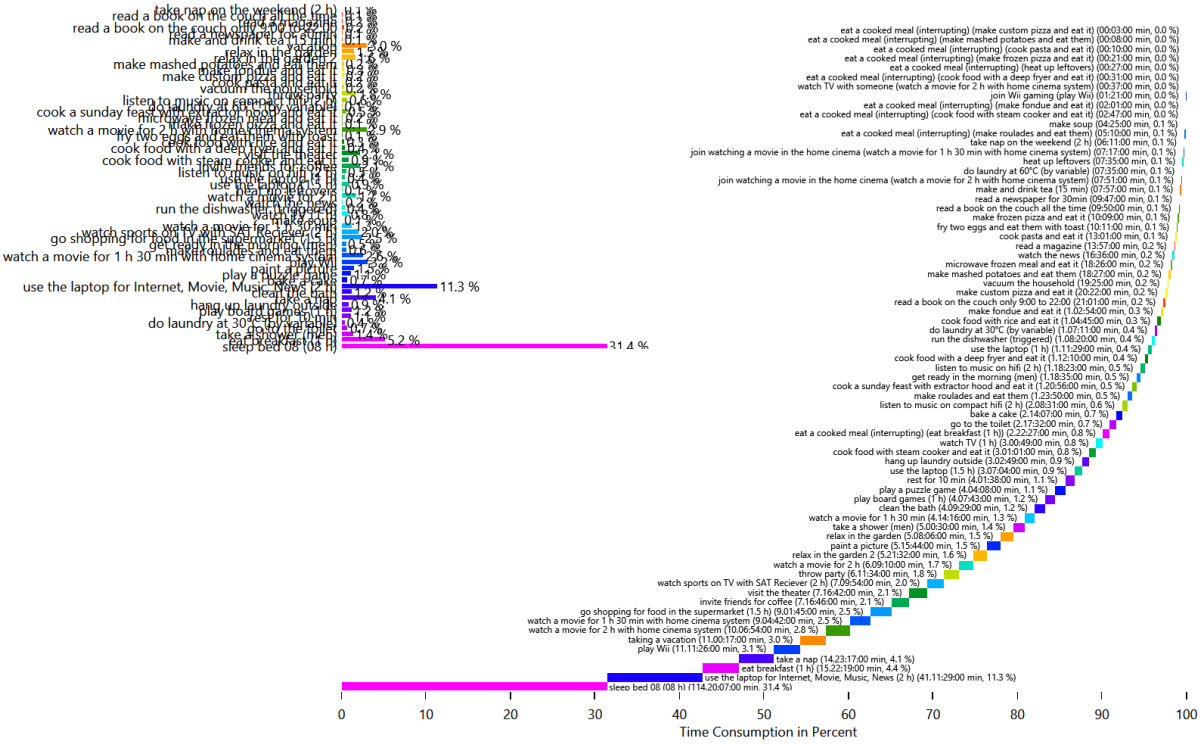
HH0 - CHR34 Julia (25 Female)



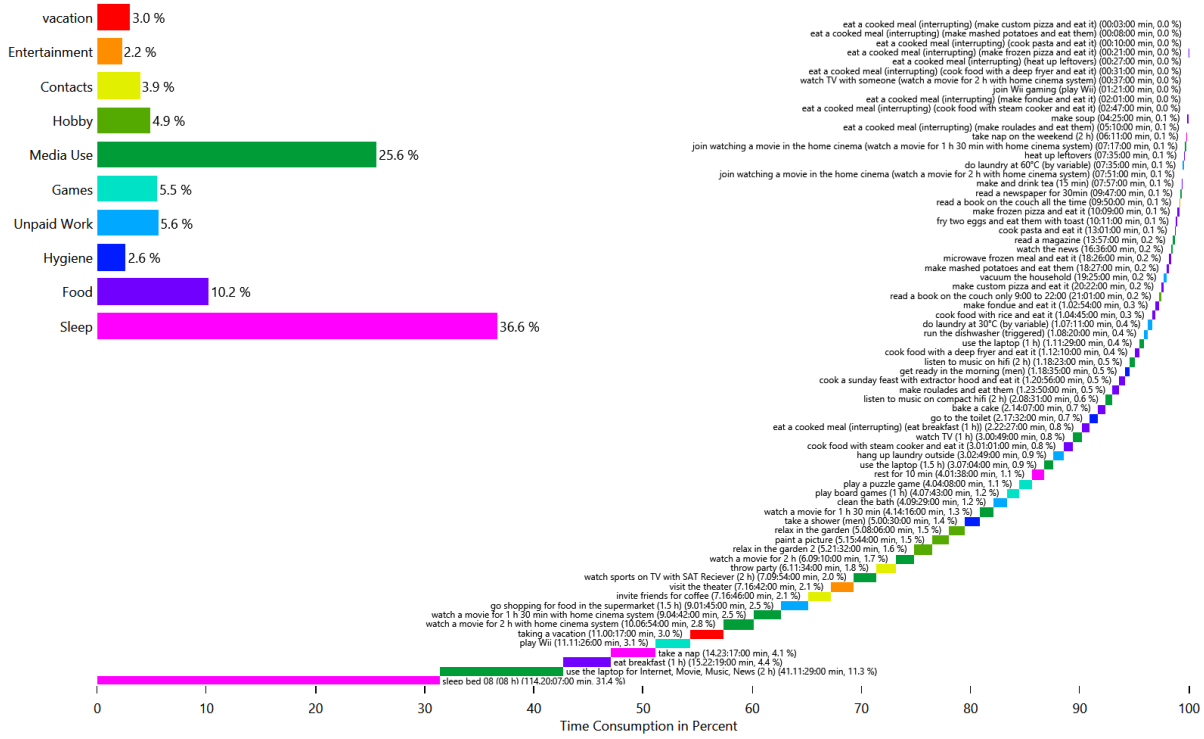
HH0 - CHR34 Romeo (26 Male)



HH0 - CHR34 Romeo (26 Male)



HH0 - CHR34 Romeo (26 Male)

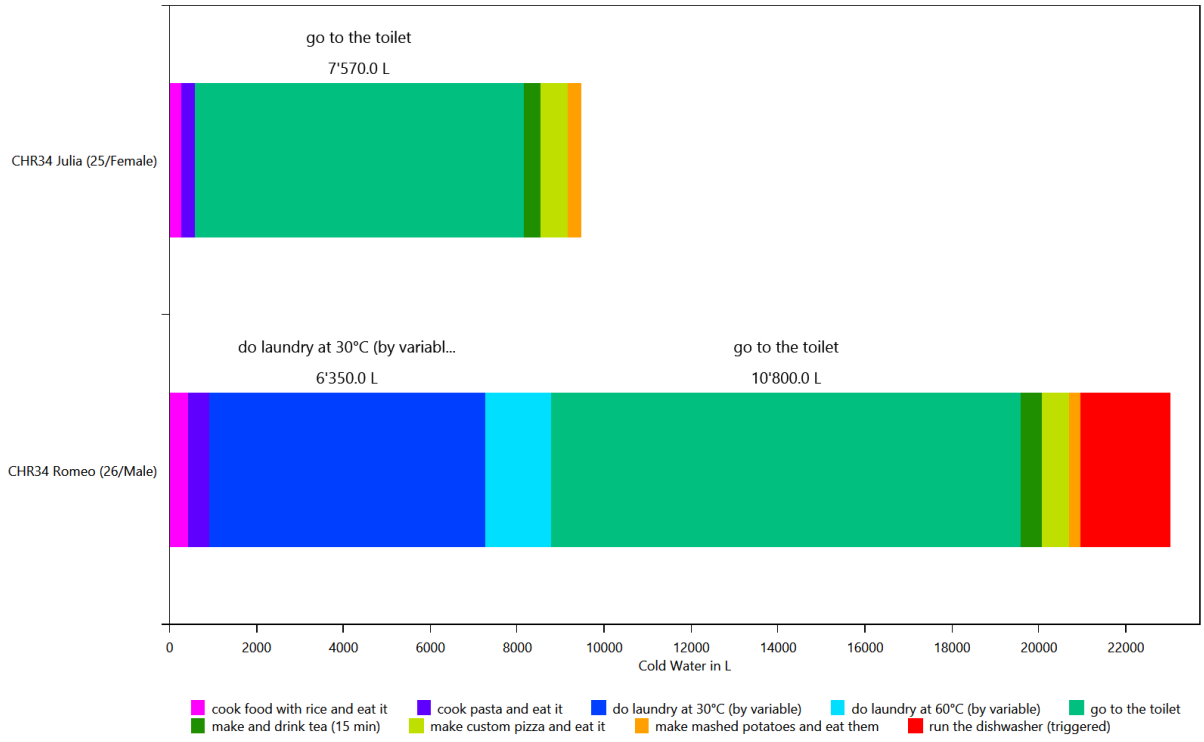


Energy use per person per affordance

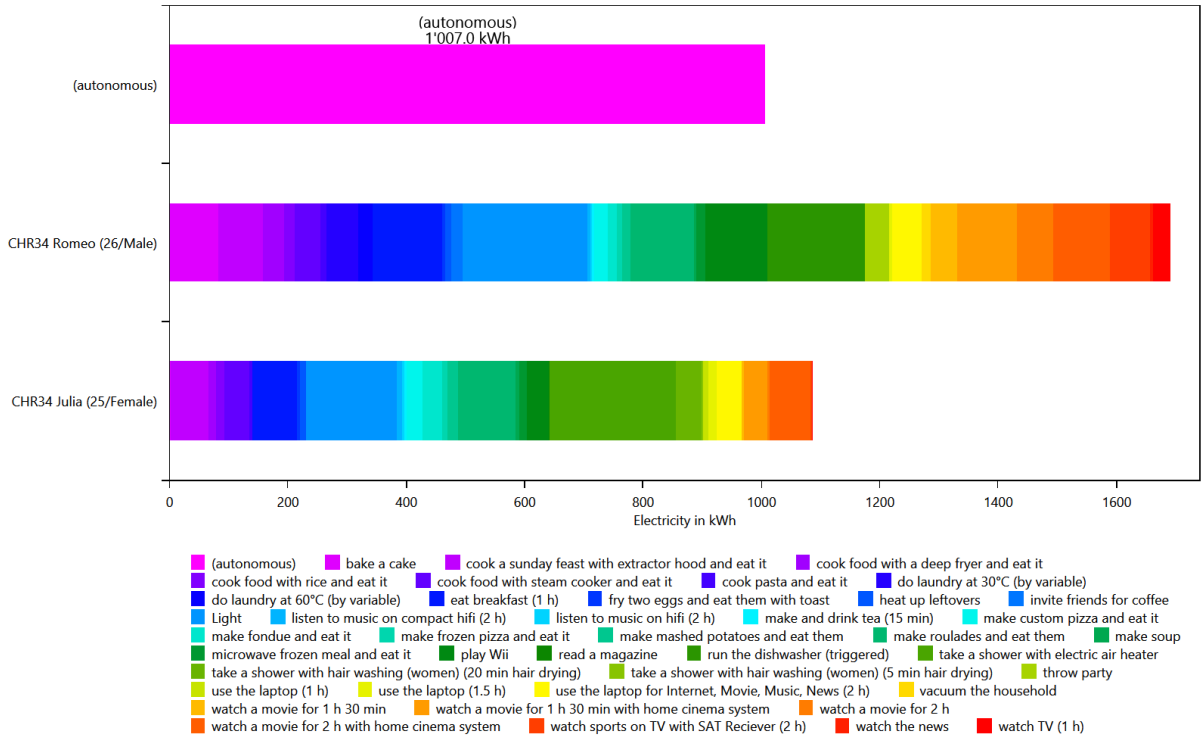
This is made from the files starting with: AffordanceEnergyUsePerPerson

This shows the distribution of the energy/ressource use to each affordance by load type and by person. This helps with figuring out if a person is using too much electricity.

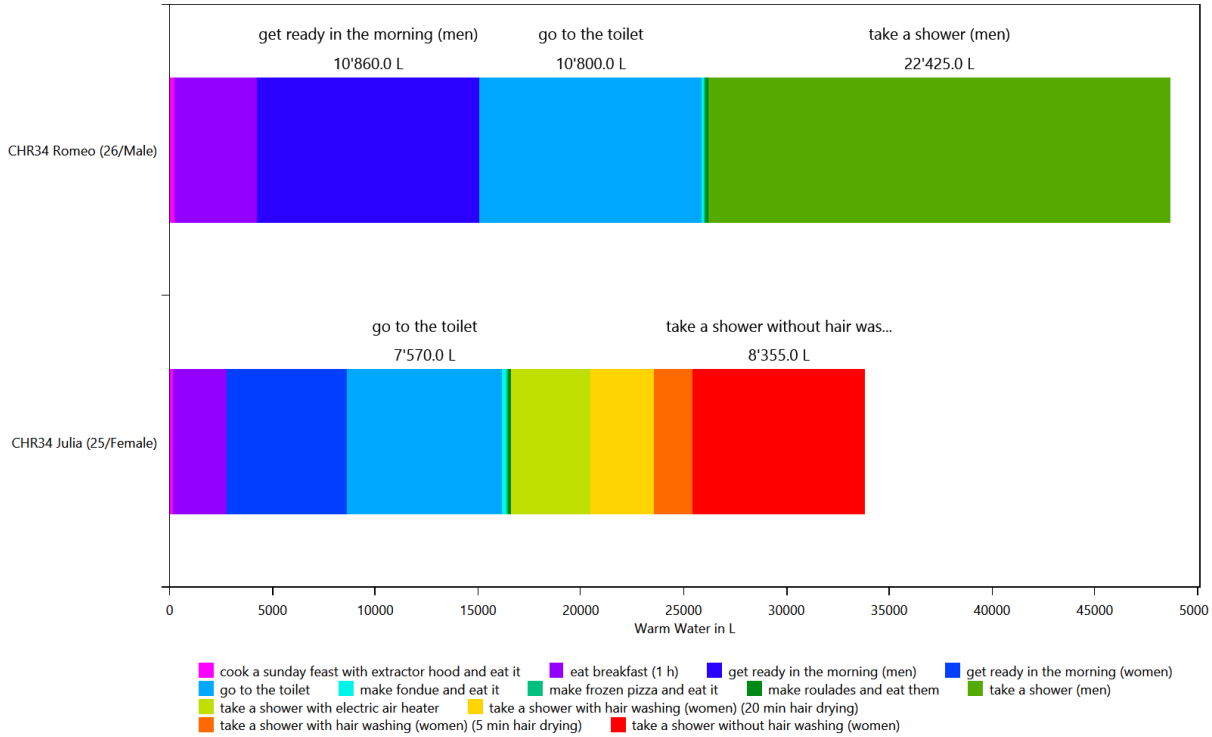
HH0 - Cold Water



HH0 - Electricity



HH0 - Warm Water

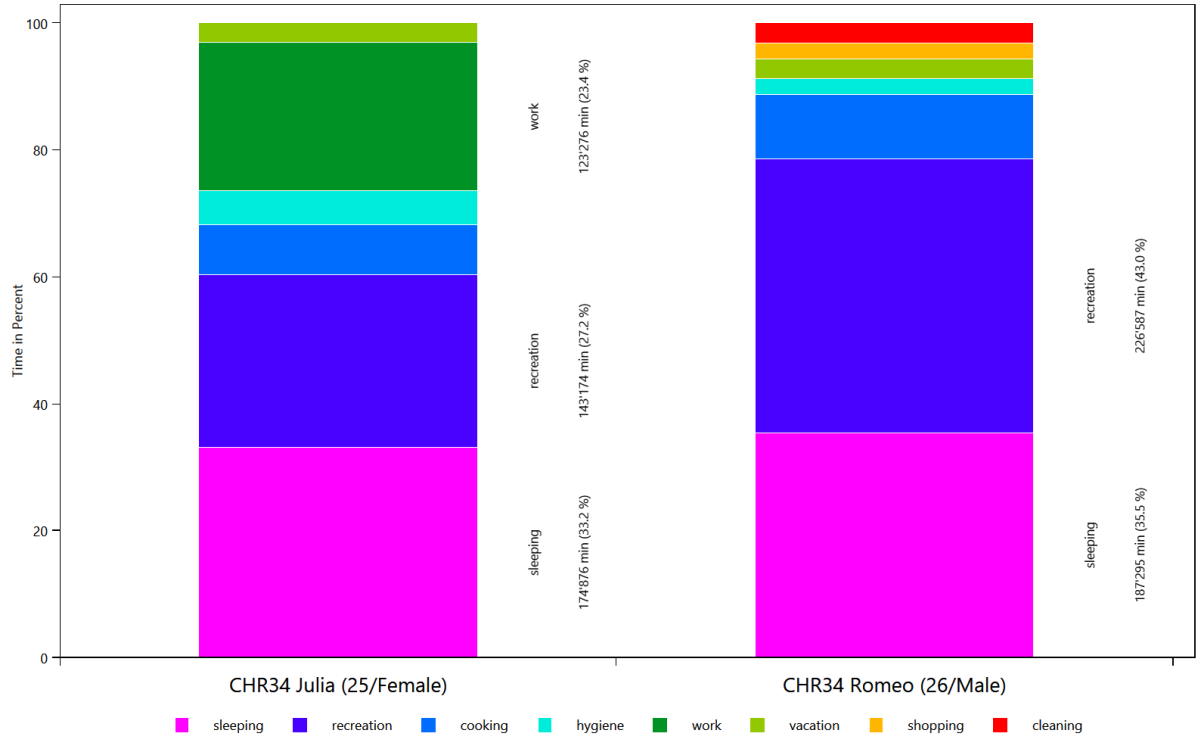


Time Use per Person Per Affordance according to different category definitions

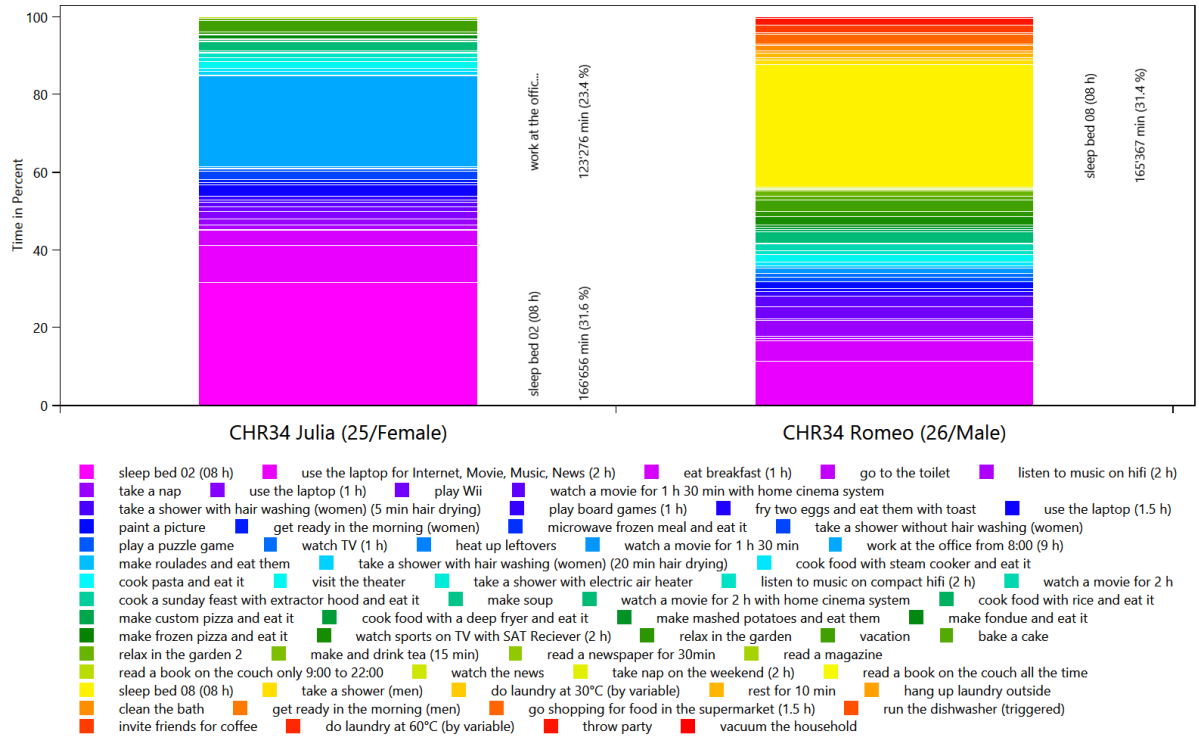
This is made from the files starting with: AffordanceTaggingSet

These charts show how the people in the household use their time. To help with analysis, the activities can be grouped by various criteria. This is done with the affordance tagging sets in the LPG.

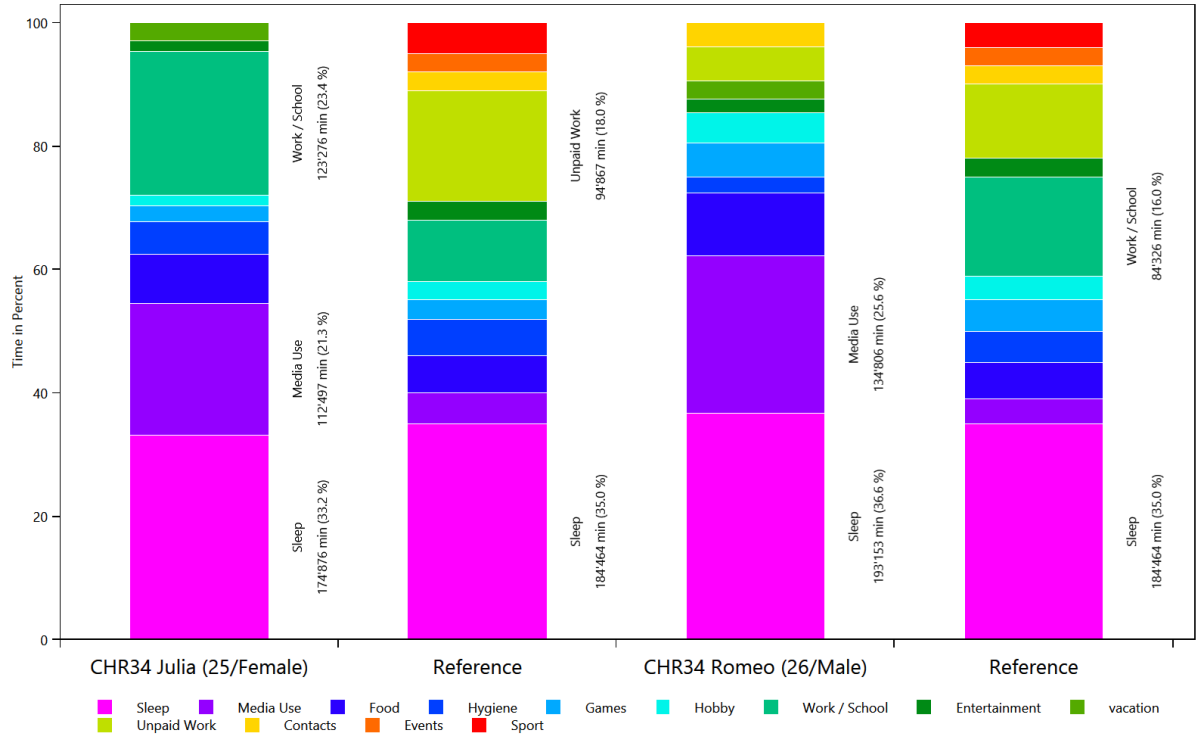
Basic Tagging - HH0



Tagging Set For Planning - HH0



Wo bleibt die Zeit - HH0

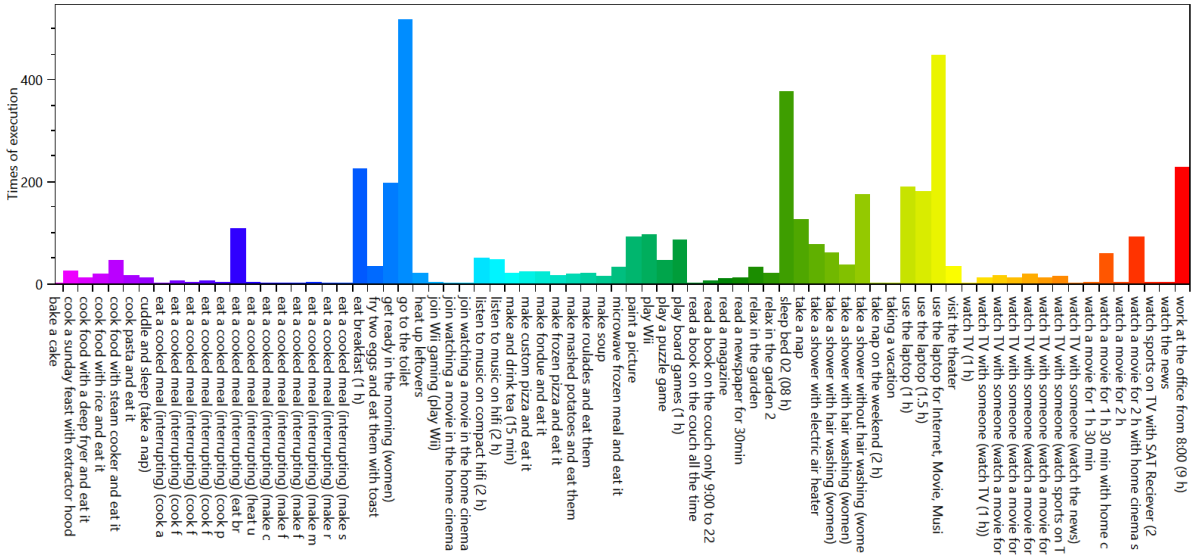


Overview of the actions of each member of the household

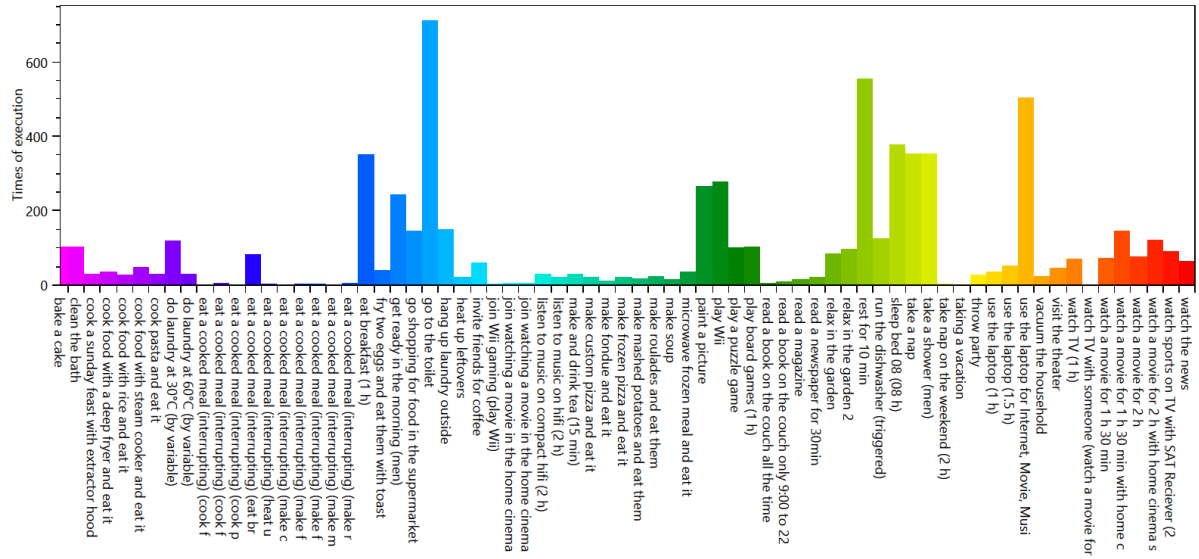
This is made from the files starting with: ExecutedActionsOverviewCount

These charts show how often each affordance was executed.

HH0 - CHR34 Julia (25 Female)



HH0 - CHR34 Romeo (26 Male)

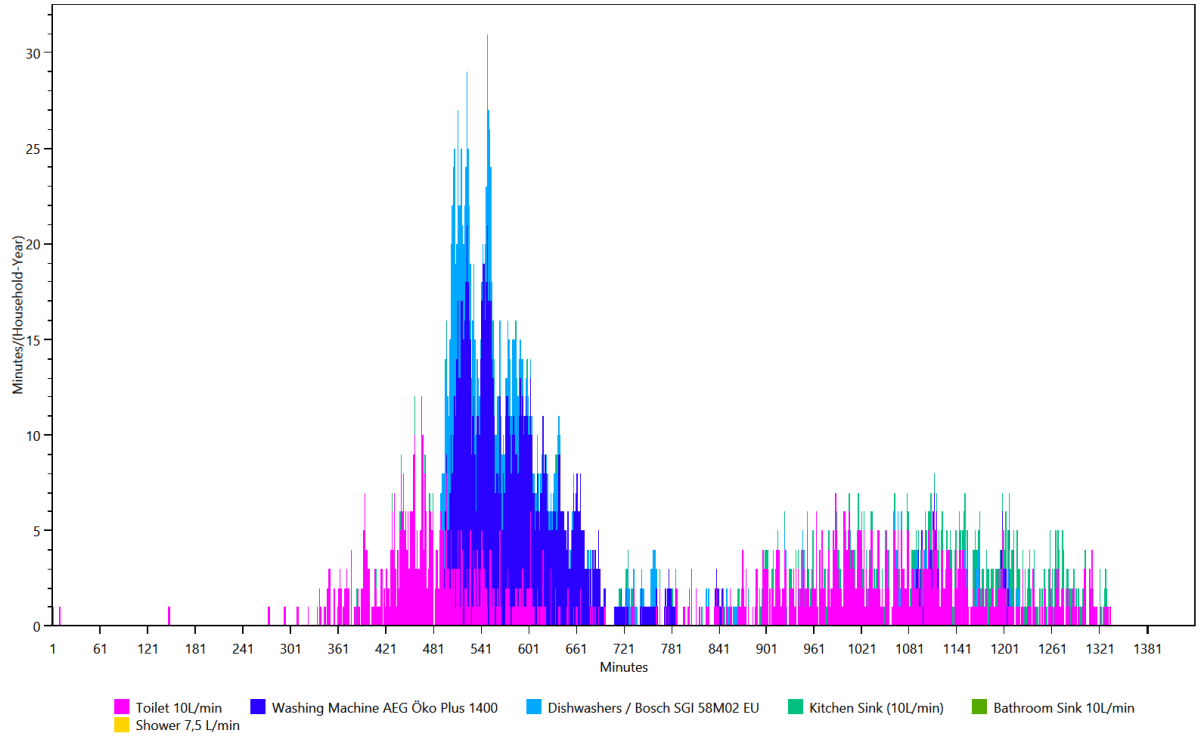


Overview of the time of the use per load type per device

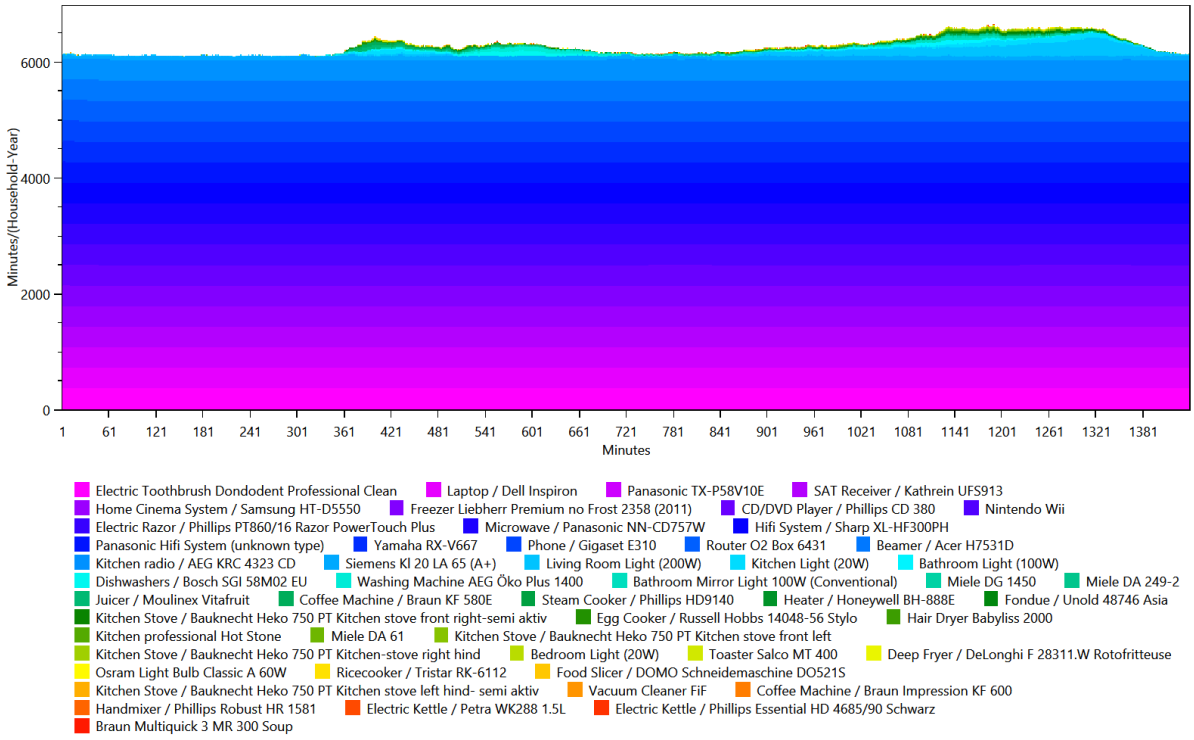
This is made from the files starting with: TimeOfUseEnergyProfiles

The time of use energy profiles shows when each device was used.

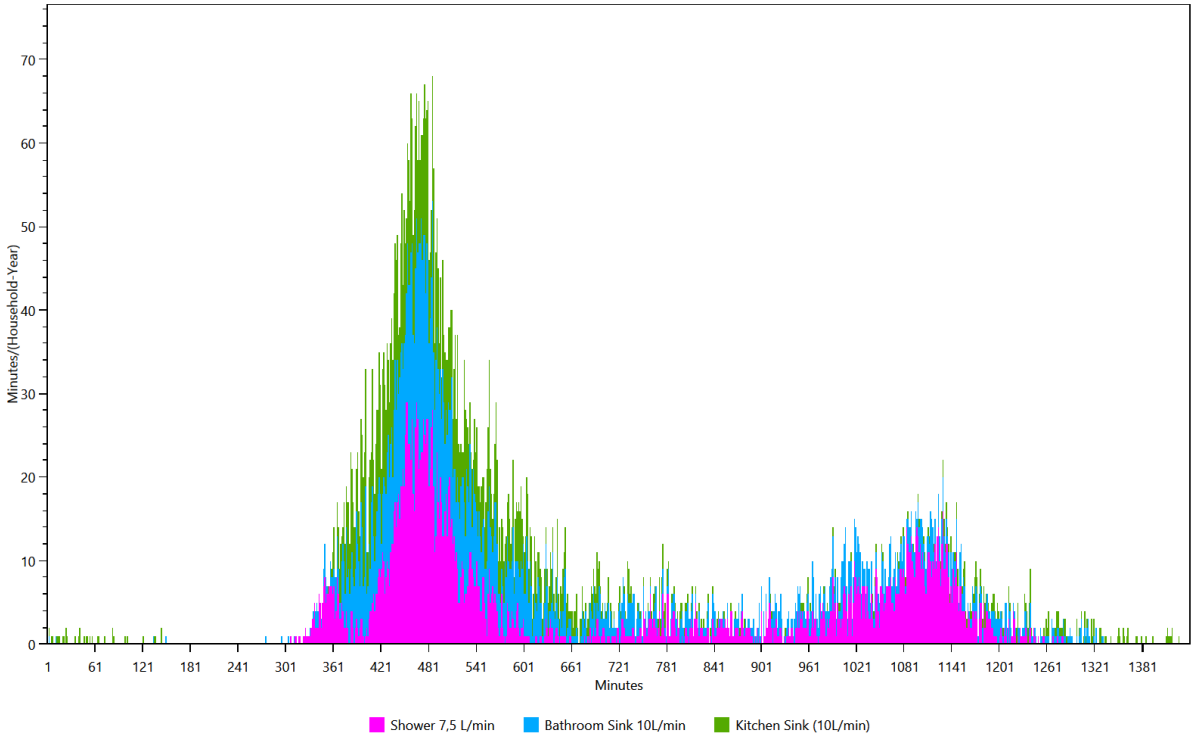
Cold Water



Electricity



Warm Water

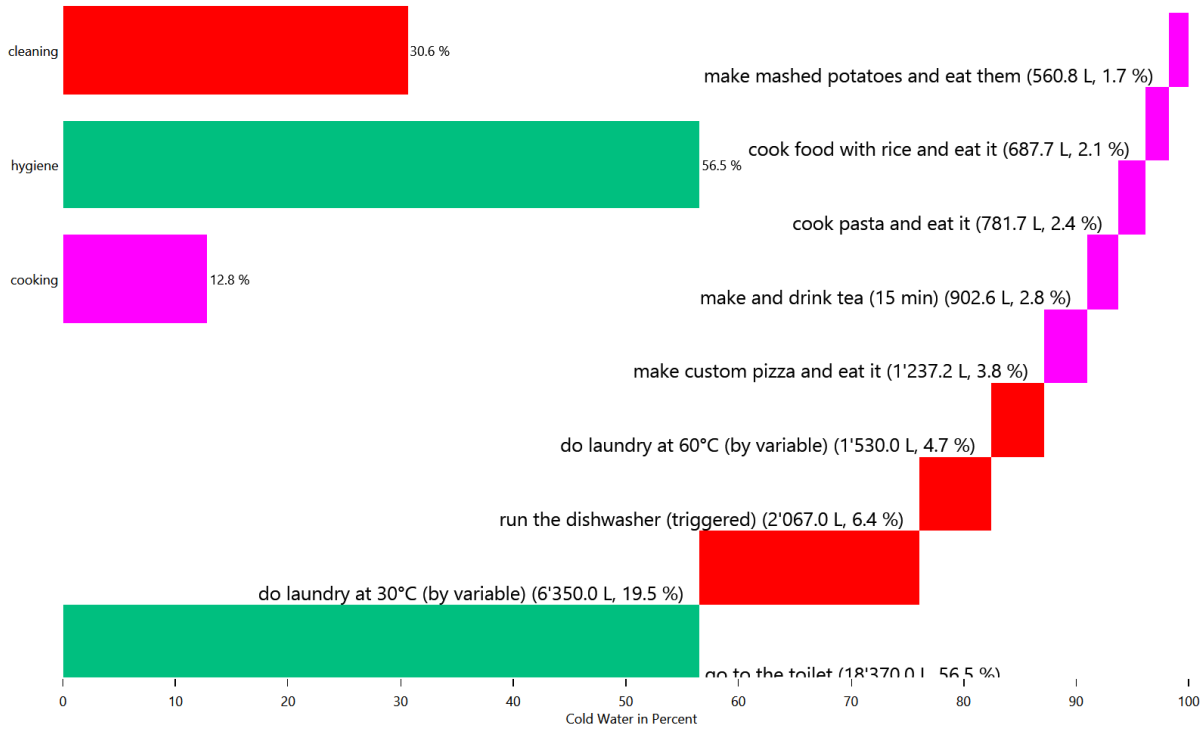


Energy/Resource use distribution per load type per affordance

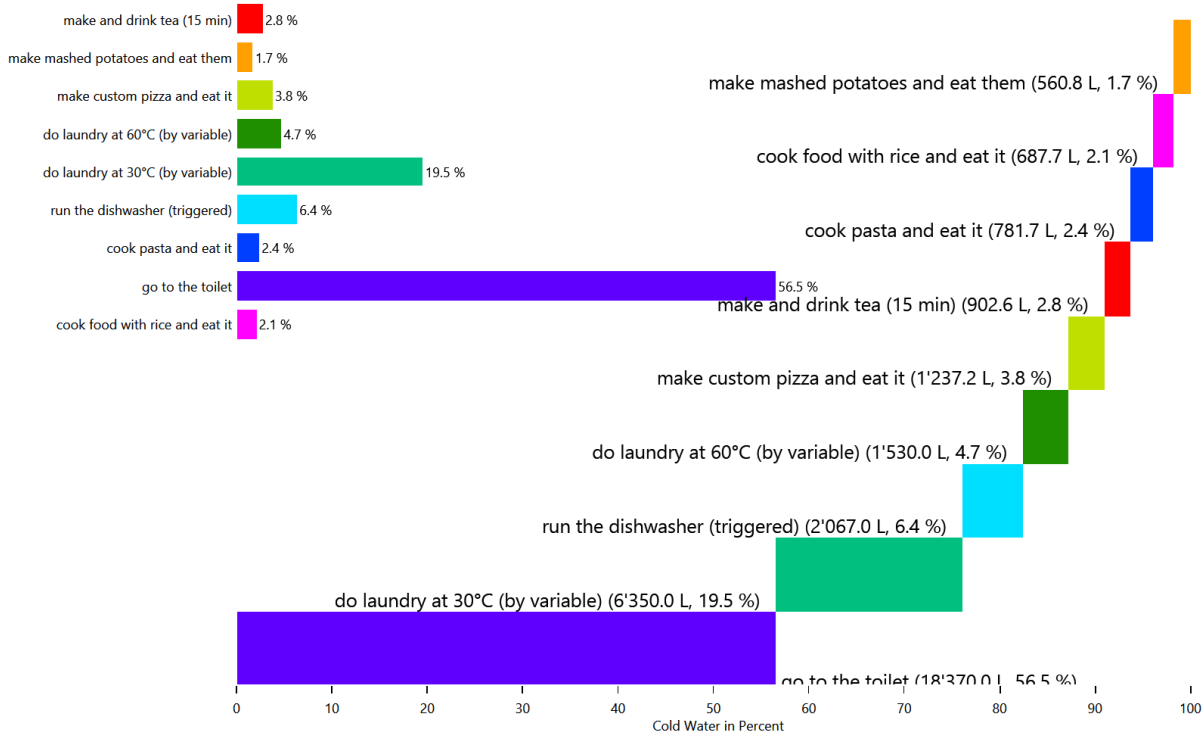
This is made from the files starting with: AffordanceEnergyUse

This shows the distribution of the energy/ressource use to each affordance by load type.

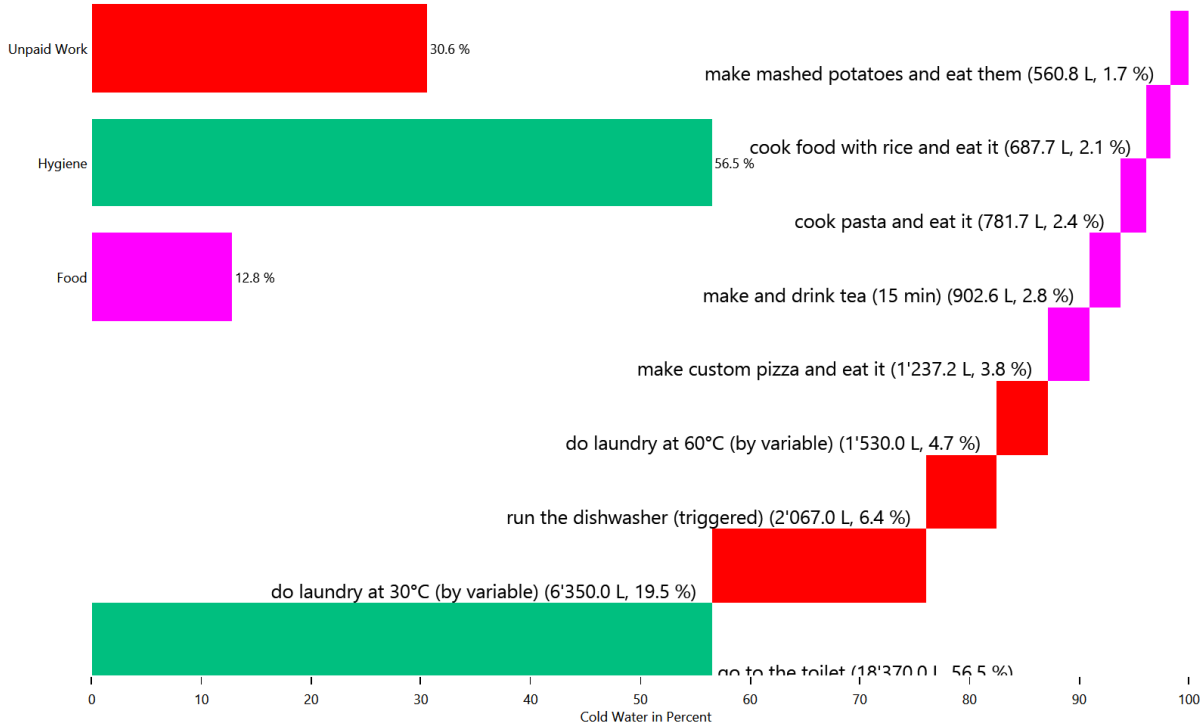
HH0 - Cold Water



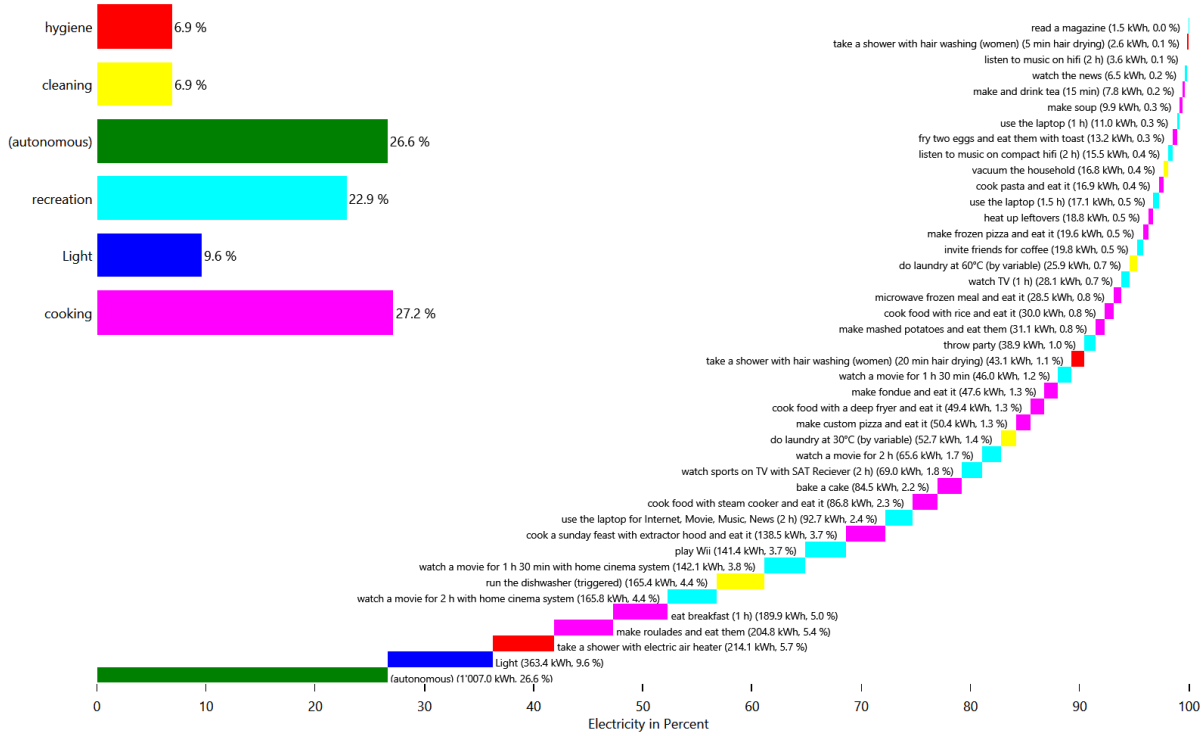
HH0 - Cold Water



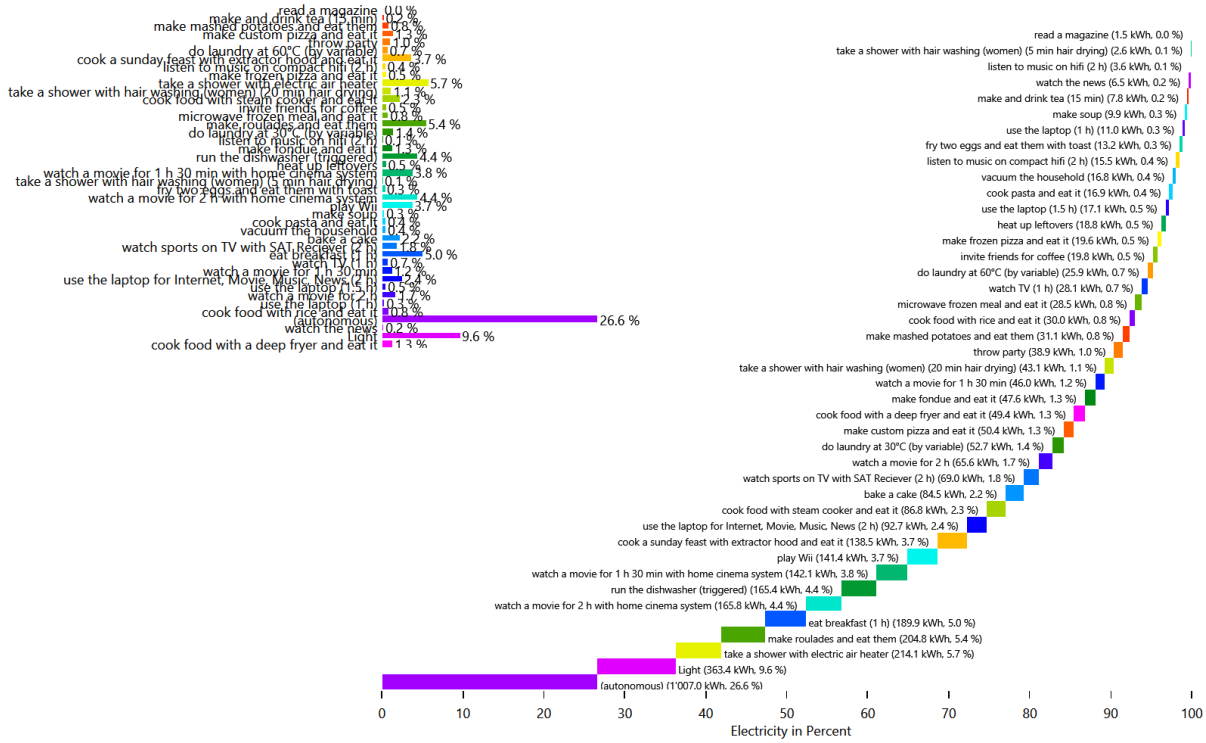
HH0 - Cold Water



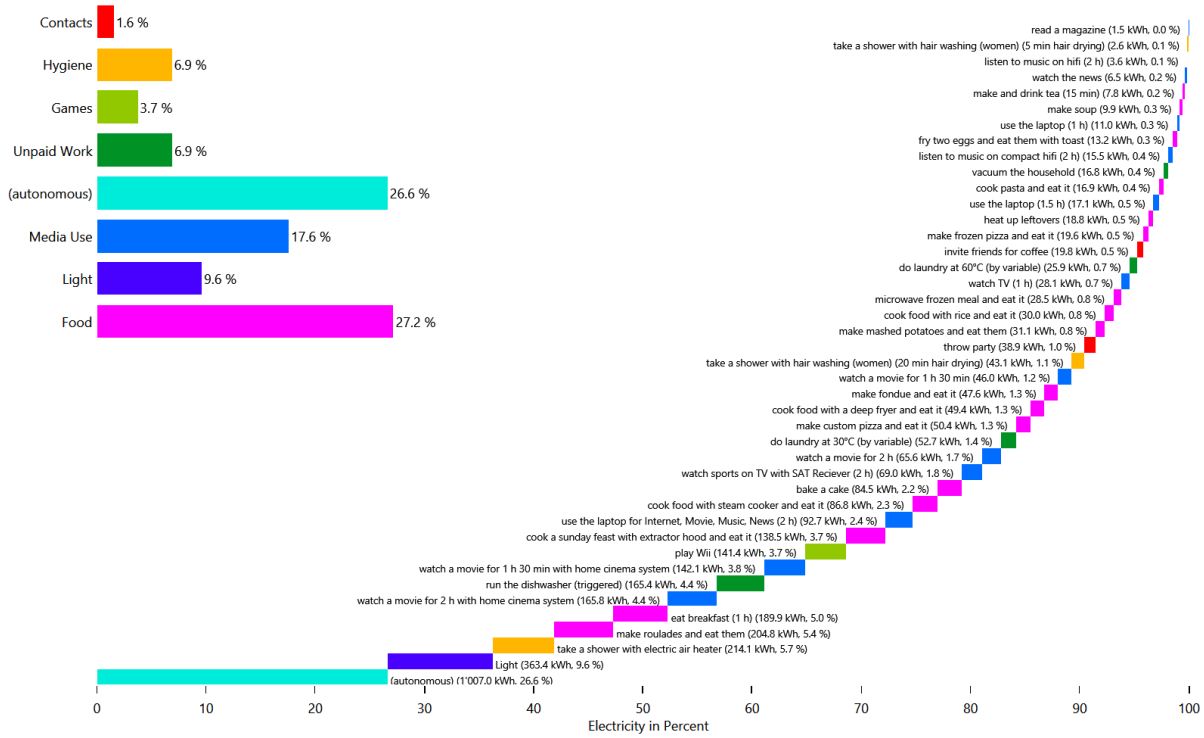
HH0 - Electricity



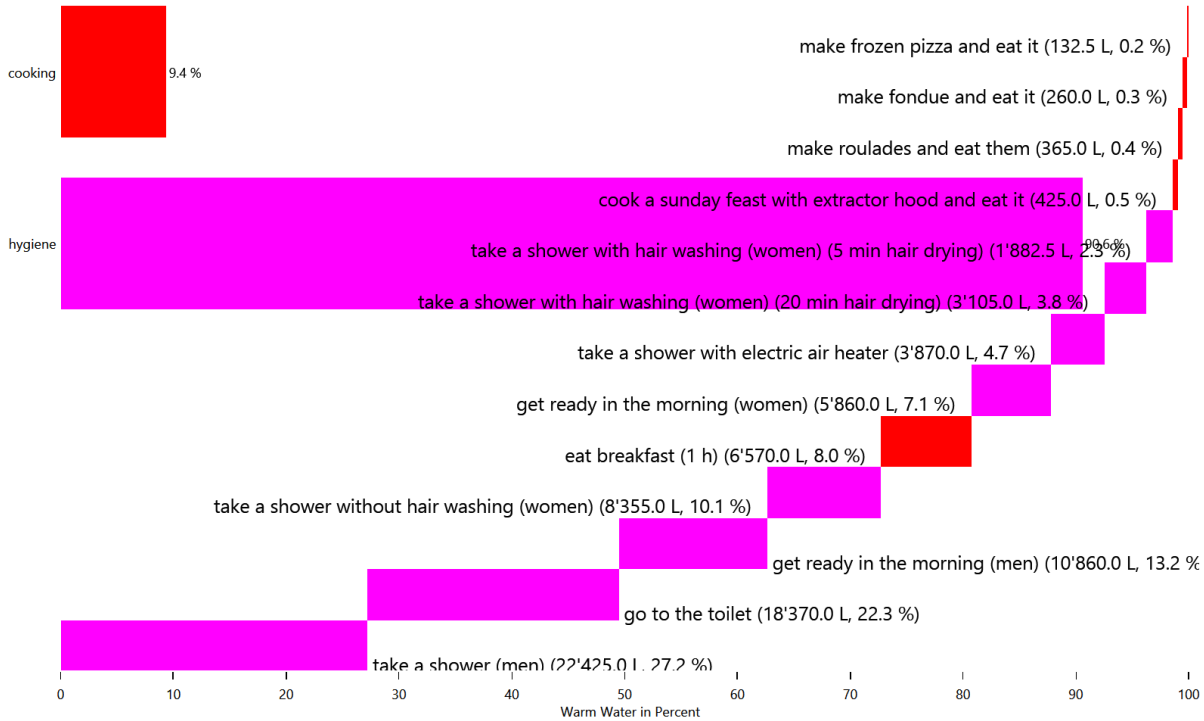
HH0 - Electricity



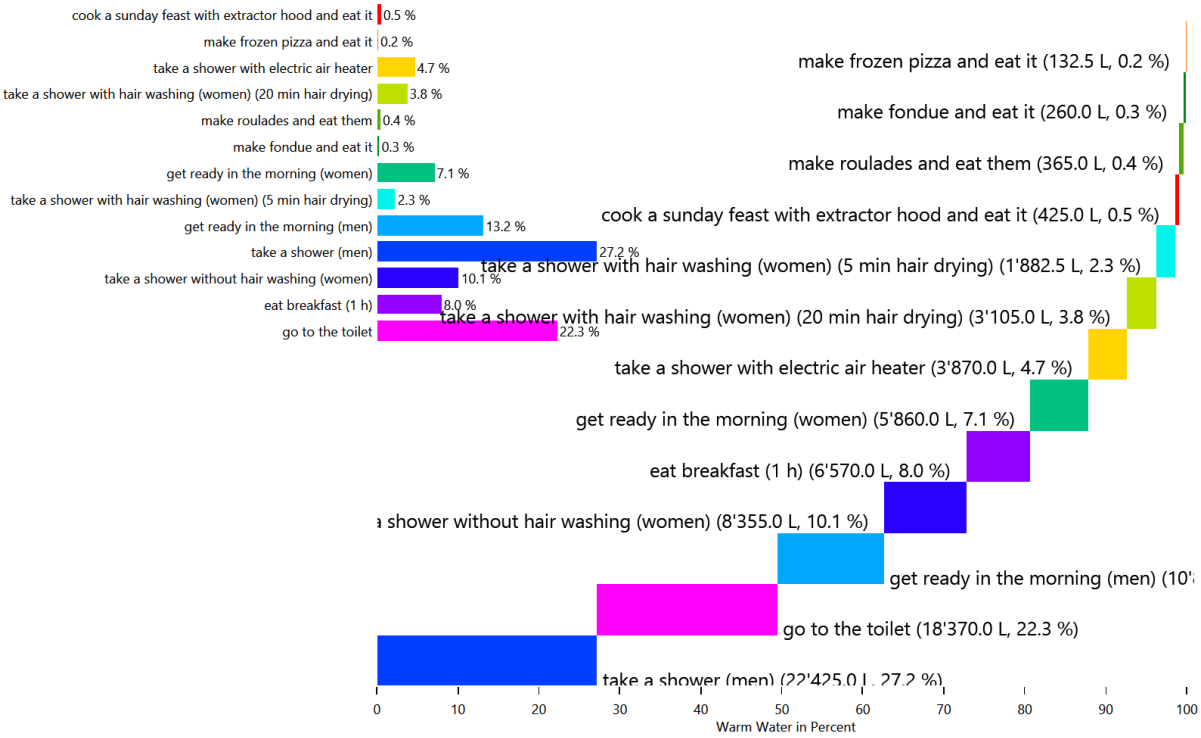
HH0 - Electricity



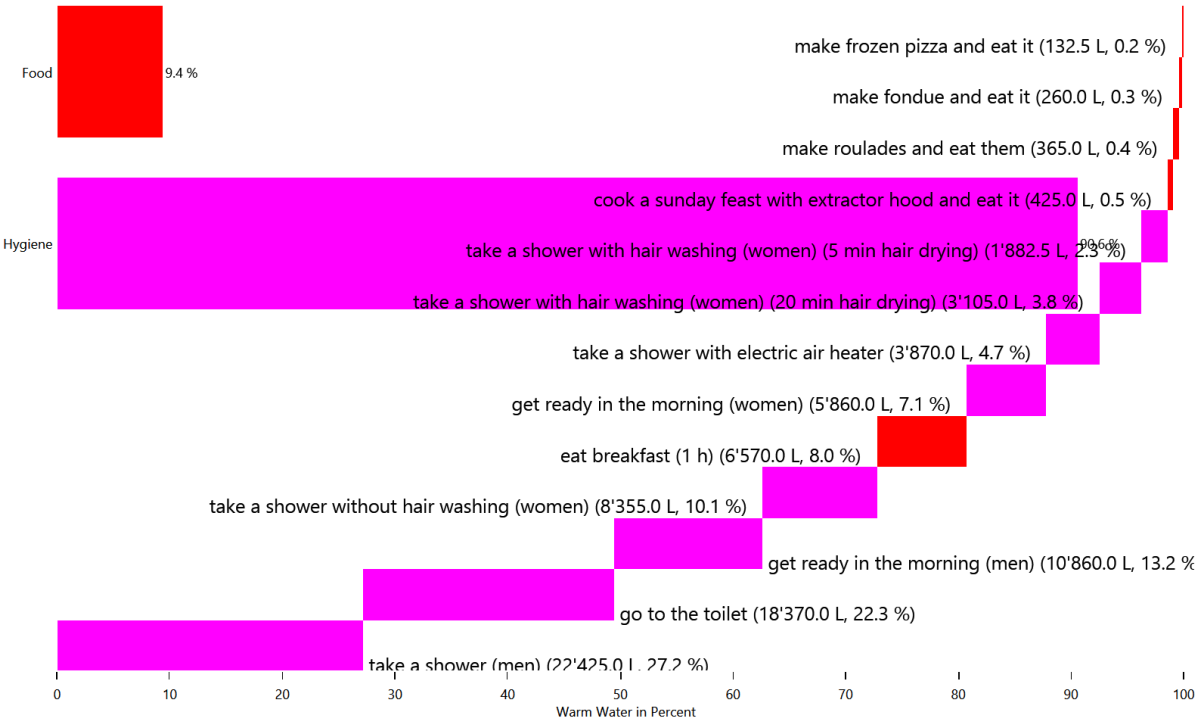
HH0 - Warm Water



HH0 - Warm Water



HH0 - Warm Water

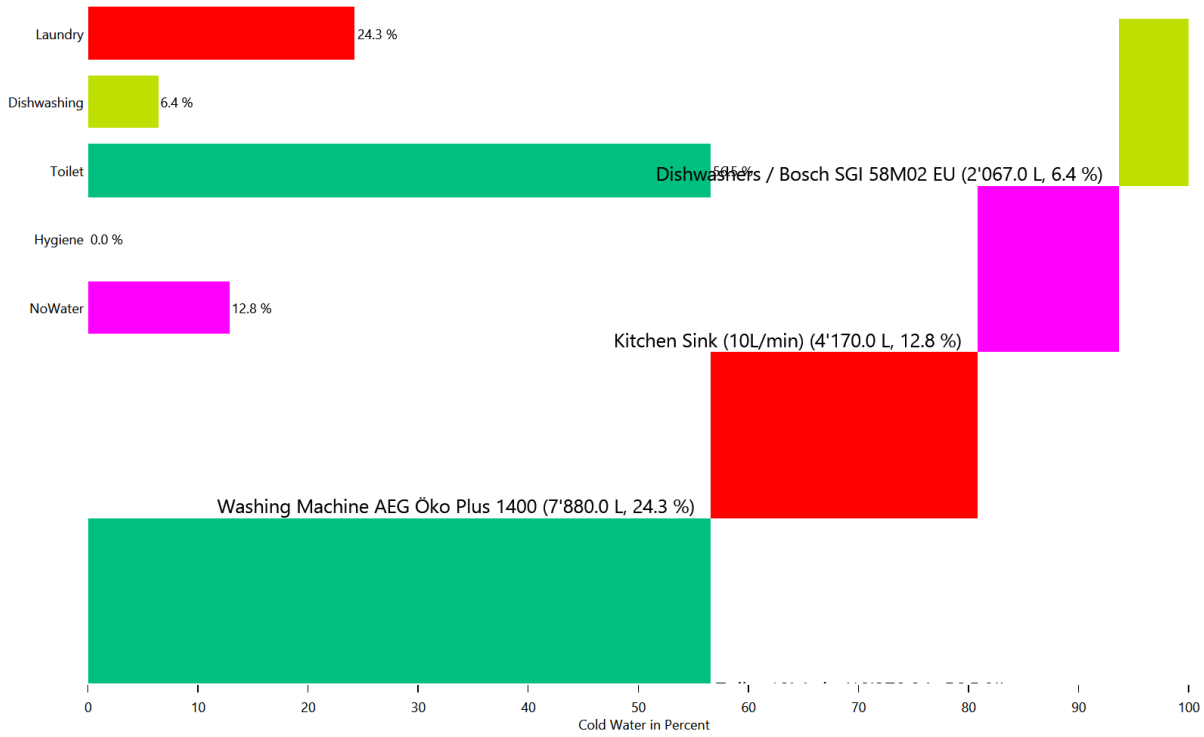


Energy use for each load type for each device

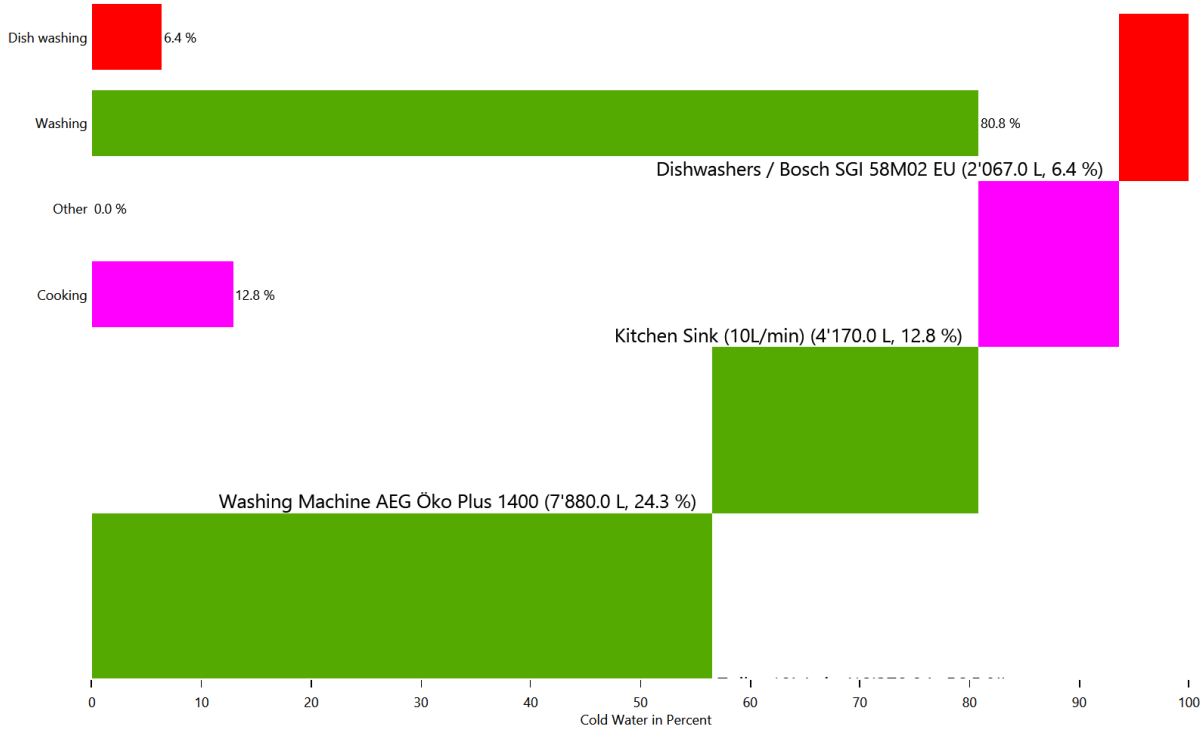
This is made from the files starting with: DeviceSums

These pie charts show the energy use for each invidividual device in each load type.

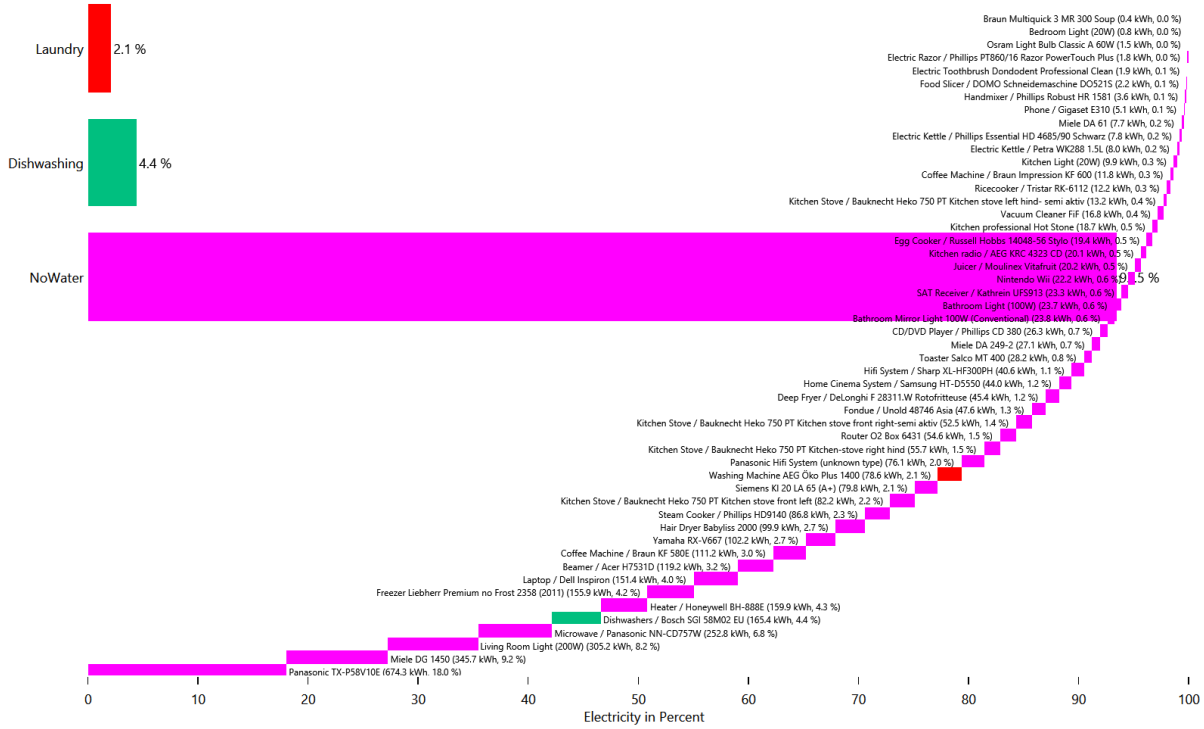
Cold Water



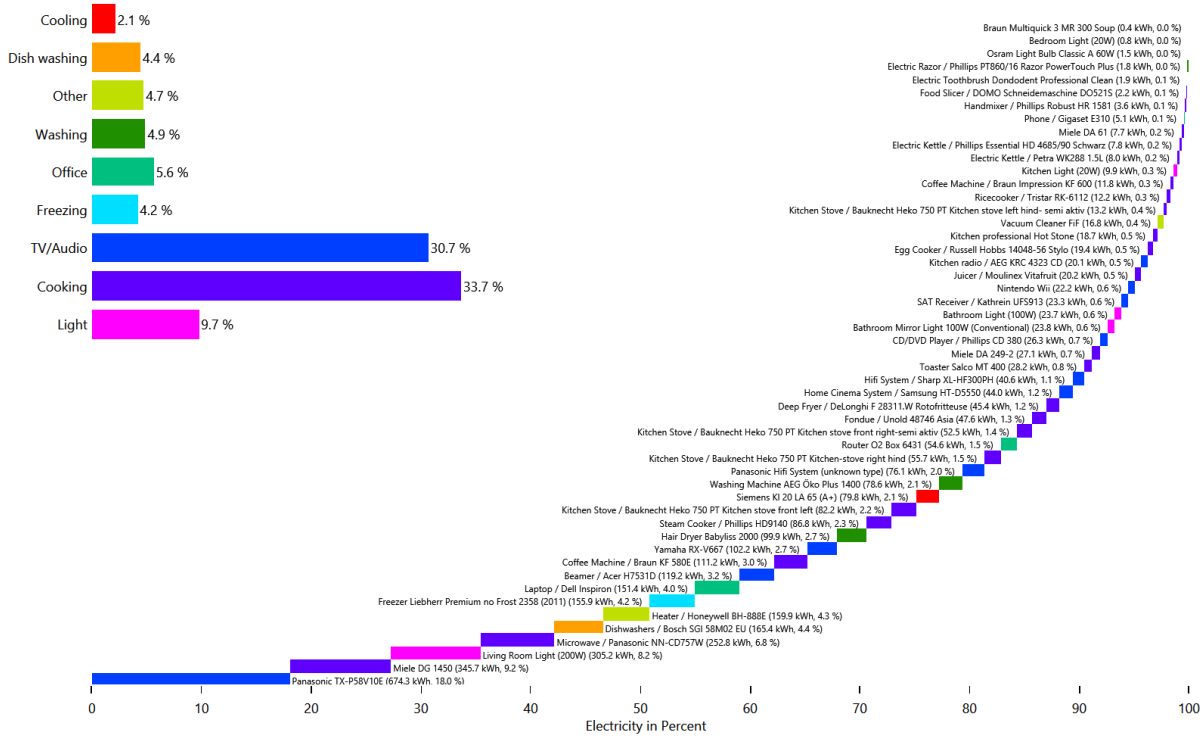
Cold Water



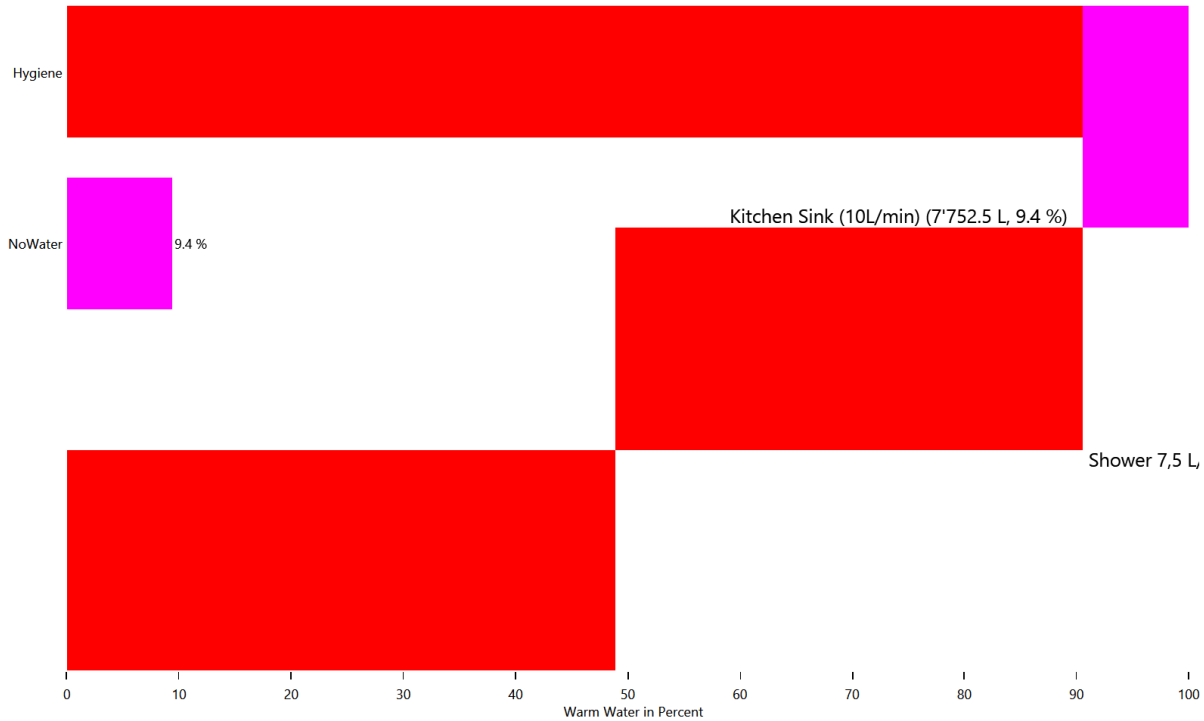
Electricity



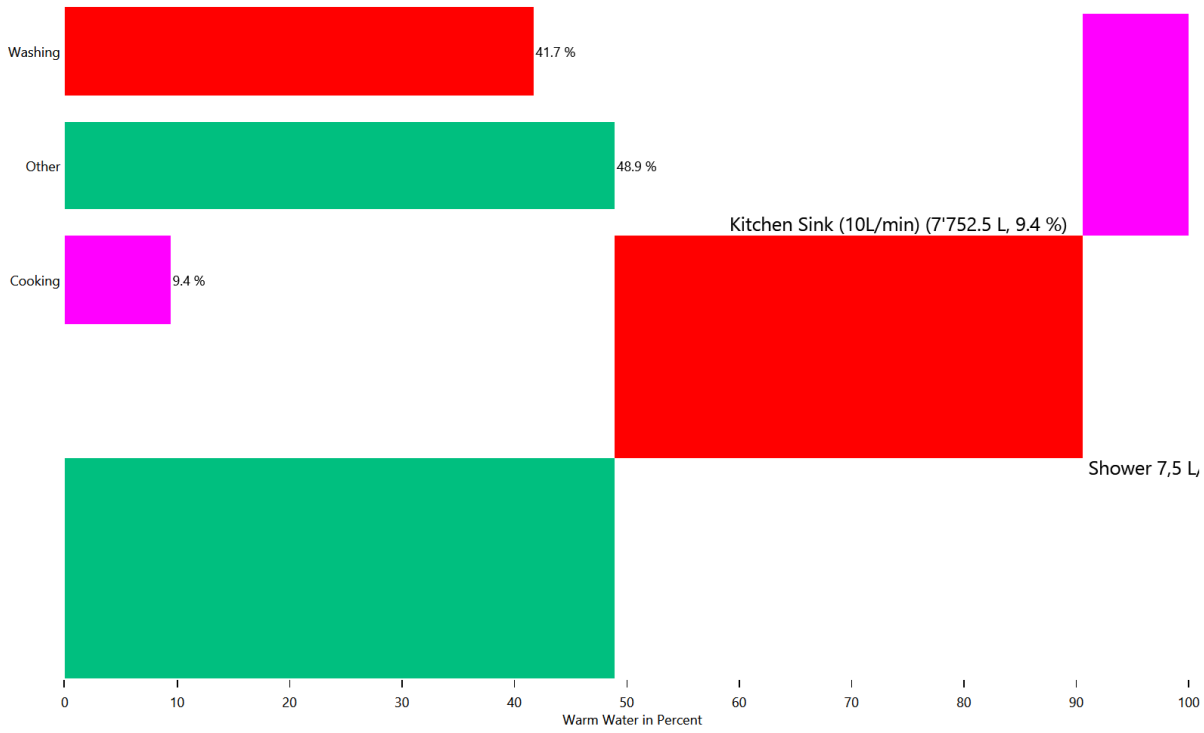
Electricity



Warm Water



Warm Water

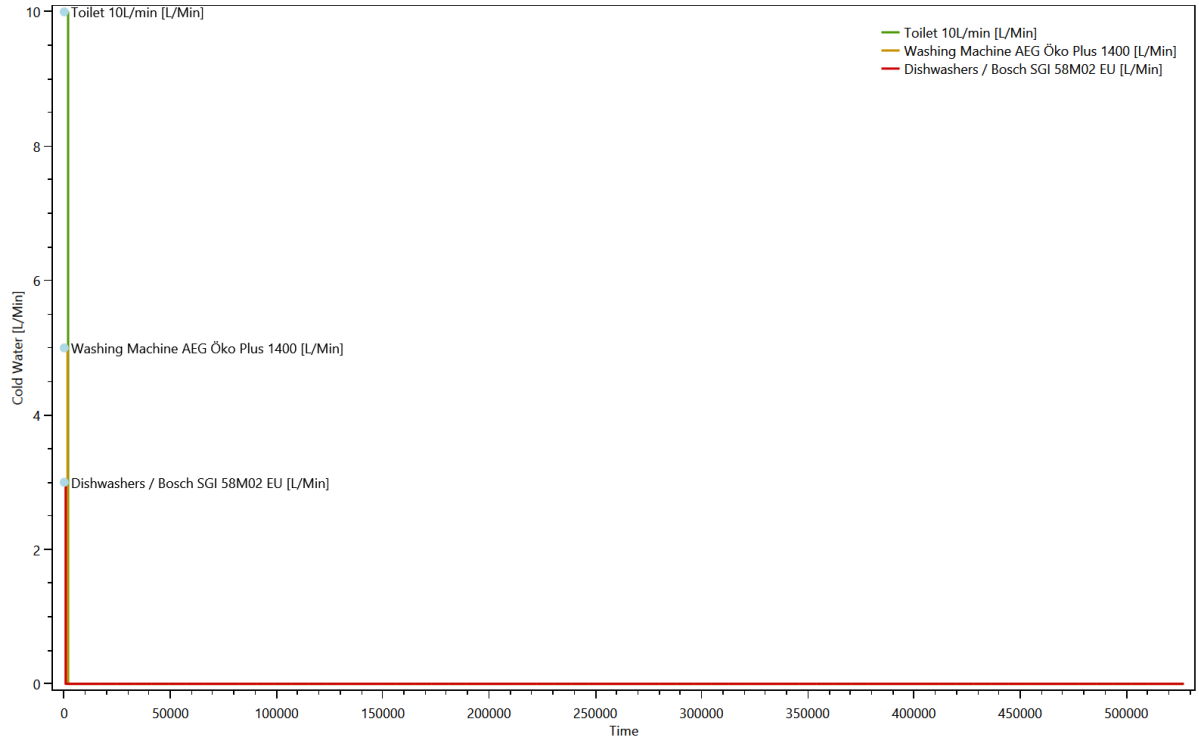

Washing
41.7 %
Other
48.9 %
Cooking
9.4 %
Kitchen Sink (10L/min) (7'752.5 L, 9.4 %)
Shower 7,5 L/
0
10
20
30
40
50
60
70
80
90
100
Warm Water in Percent

Duration curve for each device for each load type

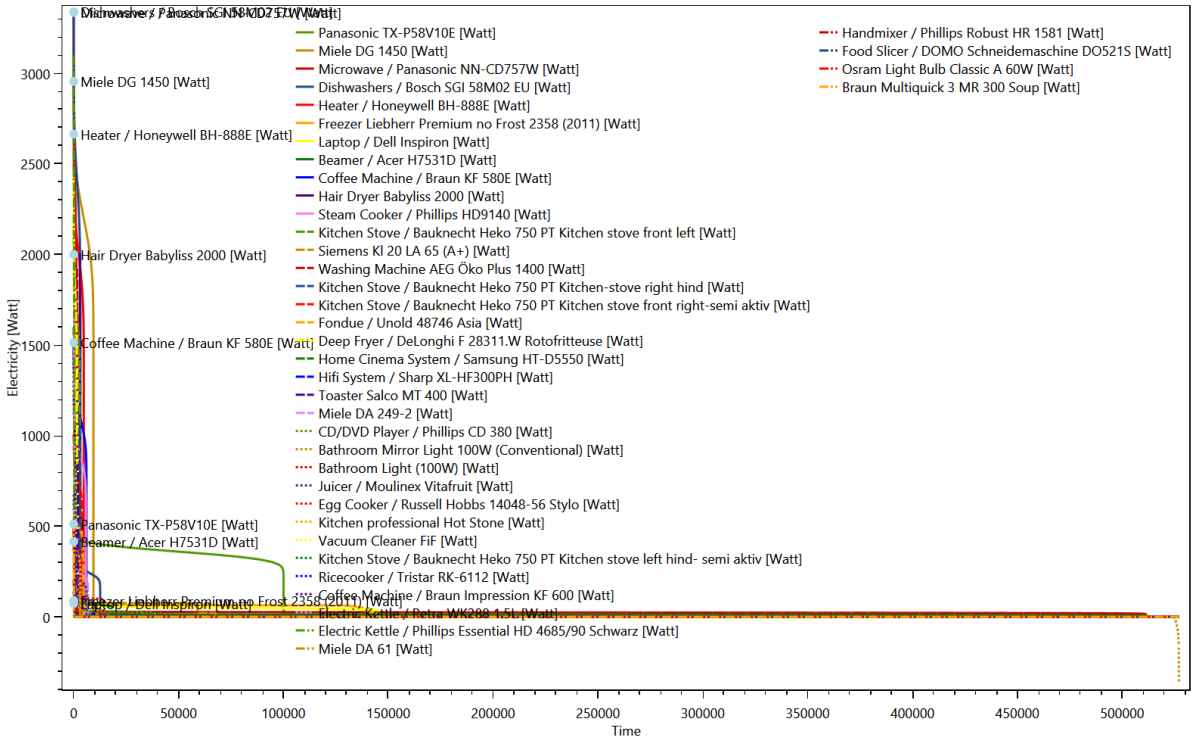
This is made from the files starting with: DeviceDurationCurves

The device duration curve show the duration curve of each device to give an overview of the power consumption.

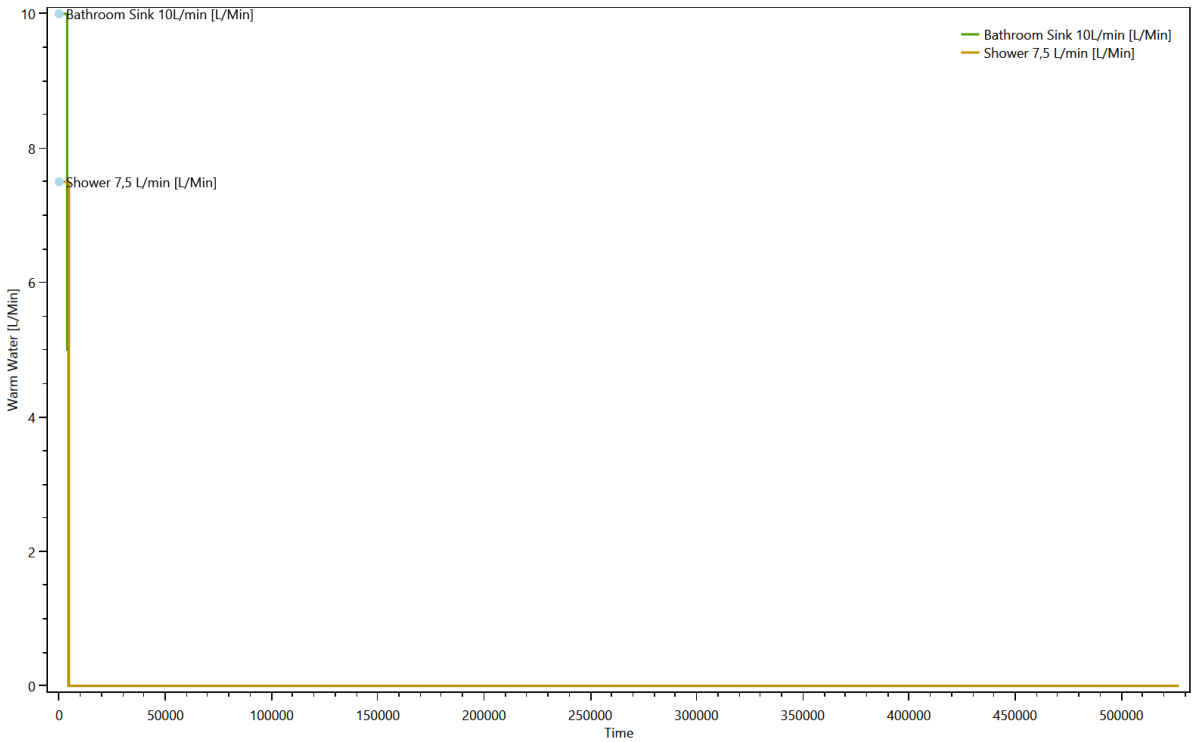
Cold Water



Electricity



Warm Water

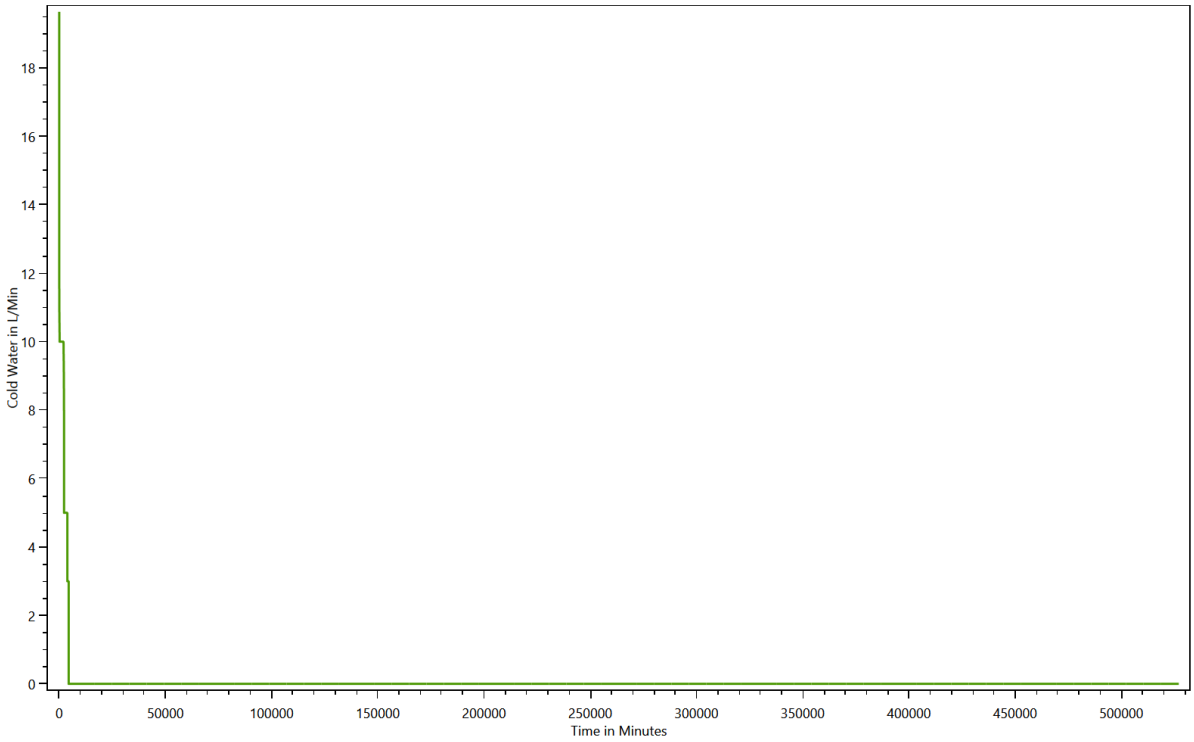


Duration curve for each load type

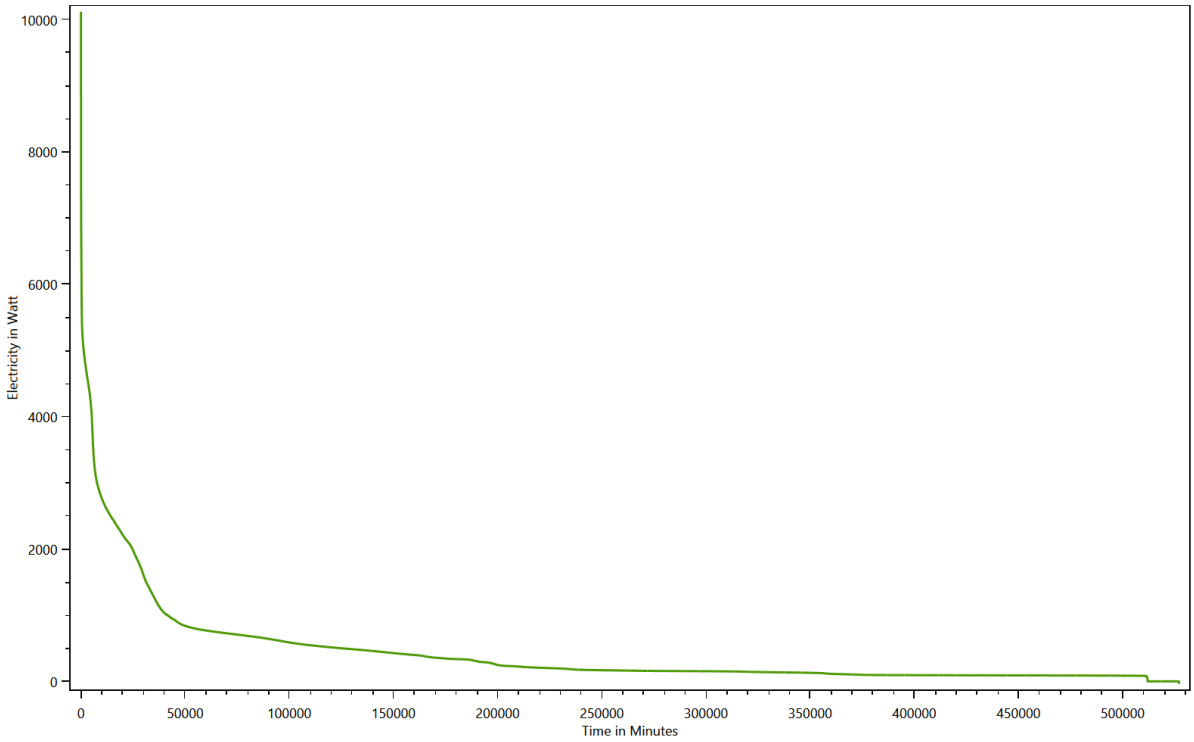
This is made from the files starting with: DurationCurve

The duration curve show the duration curve for the entire household to give an overview of the power consumption.

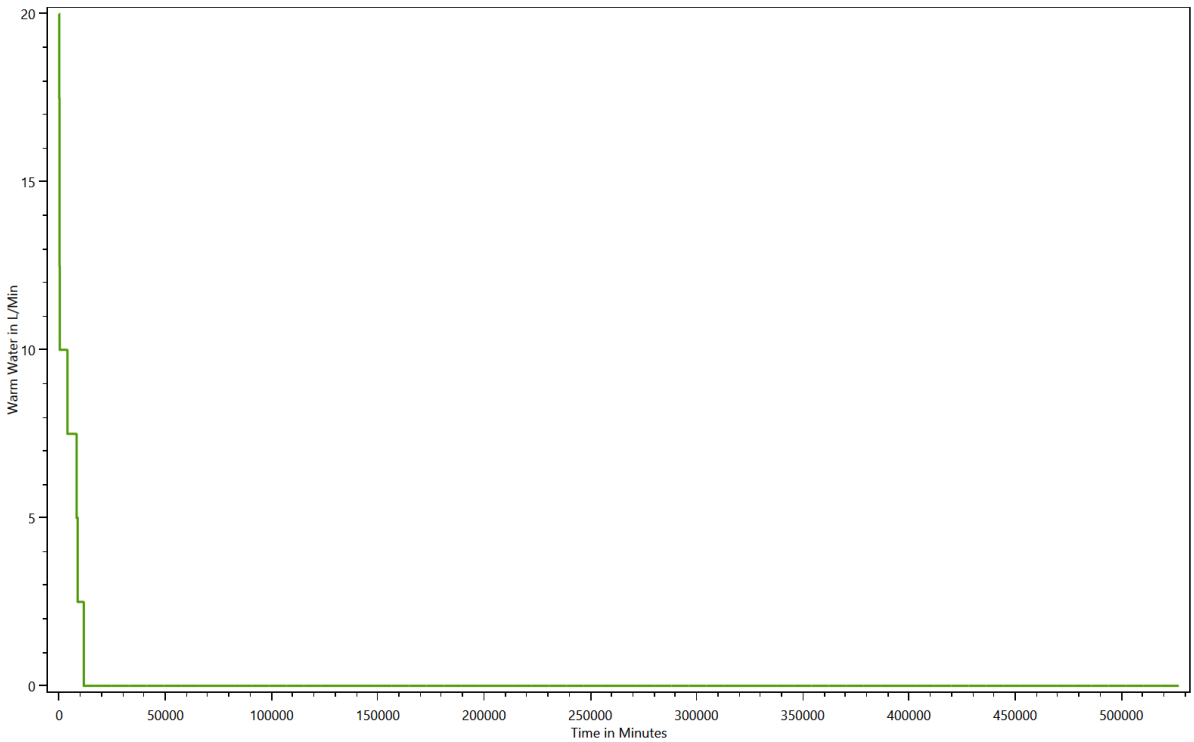
Cold Water



Electricity



Warm Water

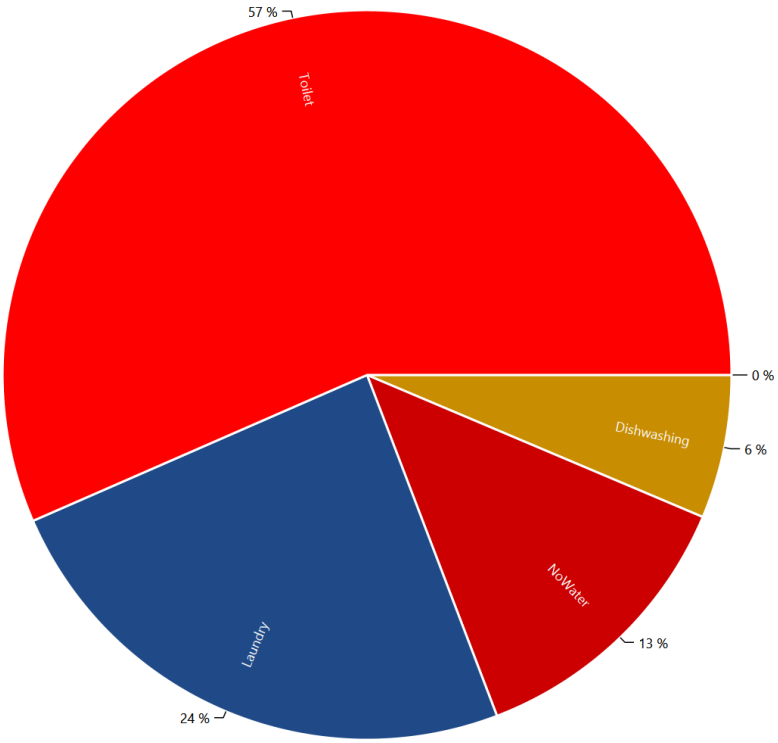


Grouped energy use for each load type for each device

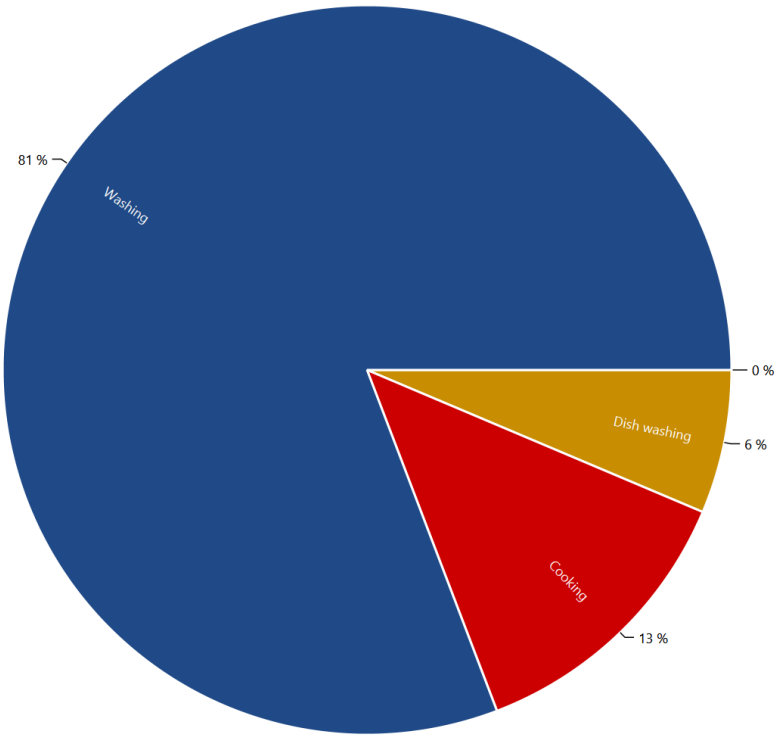
This is made from the files starting with: DeviceTaggingSet

The devices in the LPG can be grouped with various criteria by the device tagging sets. These charts show the results.

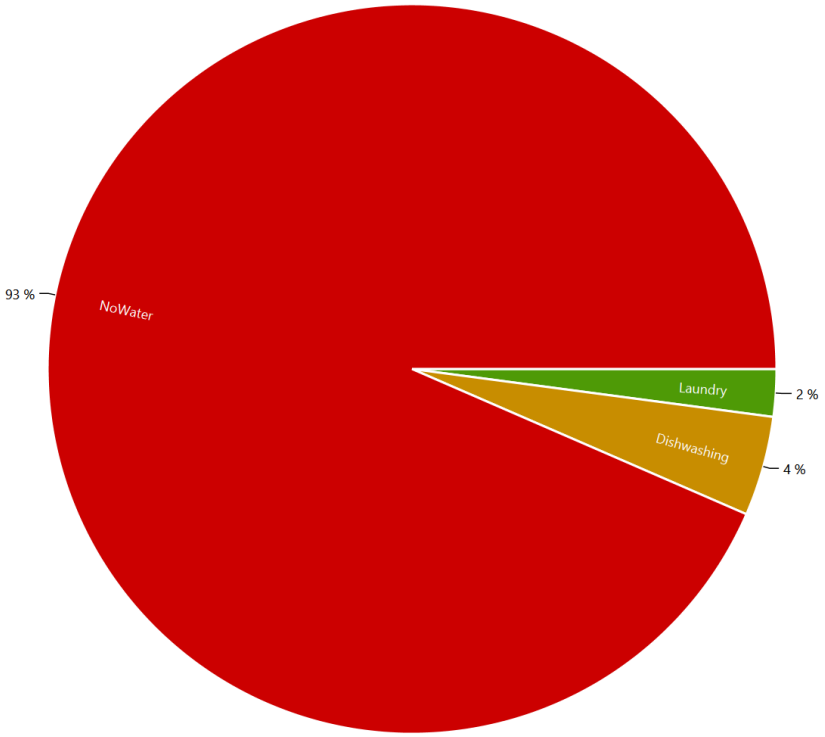
HH0 - Destatis Water Usage Statistics - Cold Water



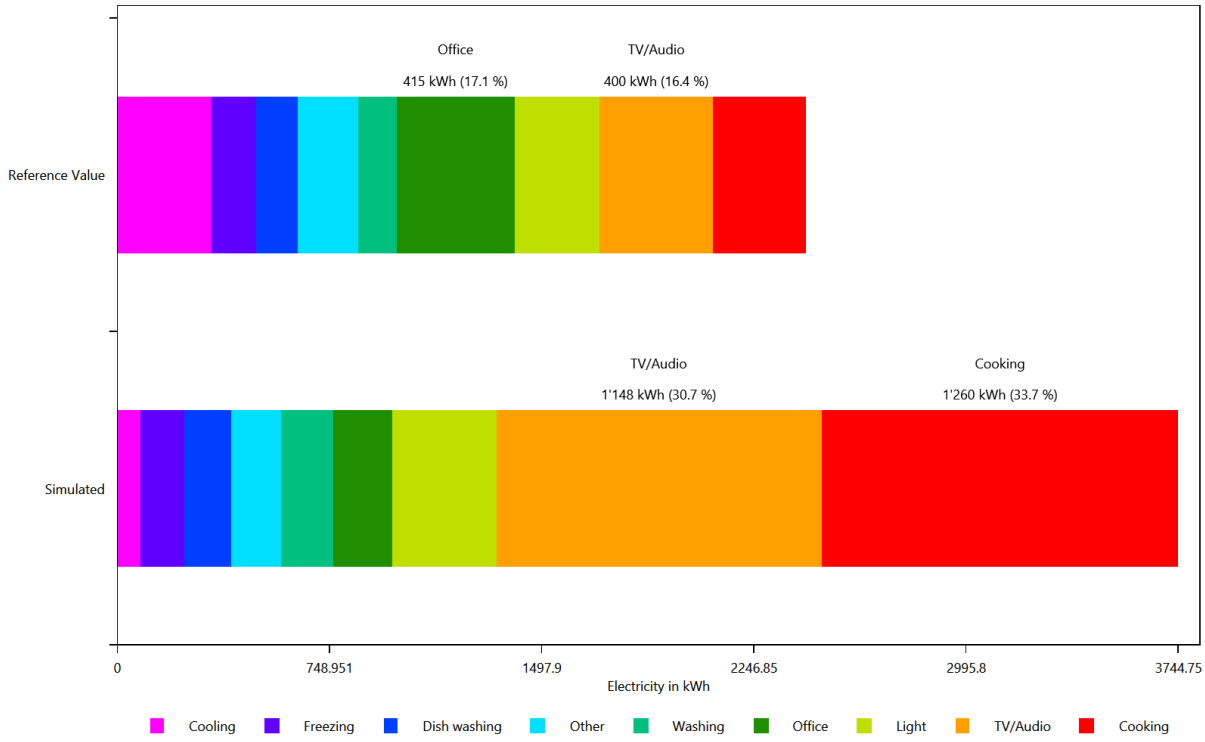
HH0 - Energieagentur - Cold Water



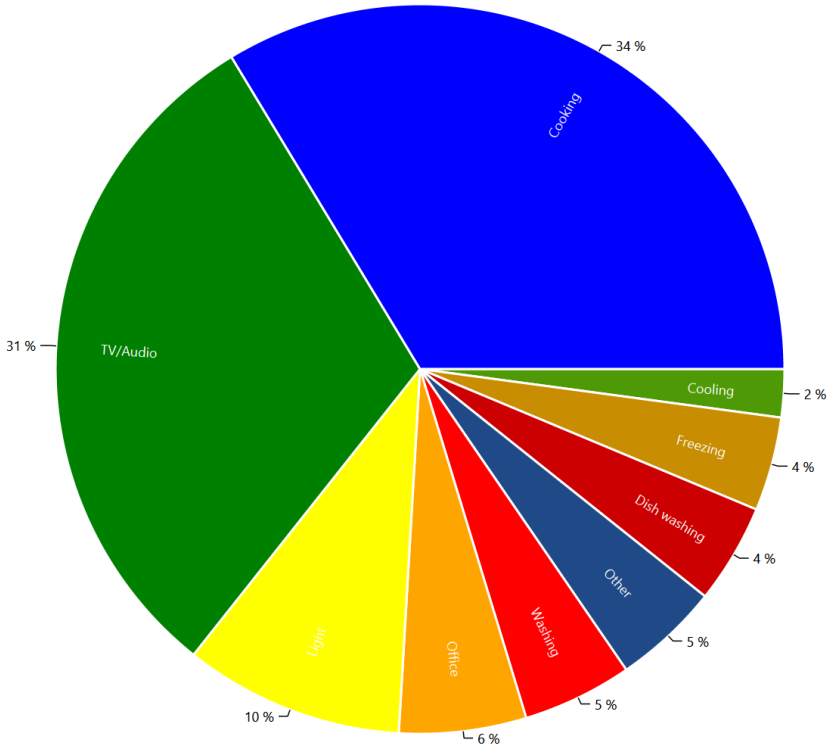
HH0 - Destatis Water Usage Statistics - Electricity



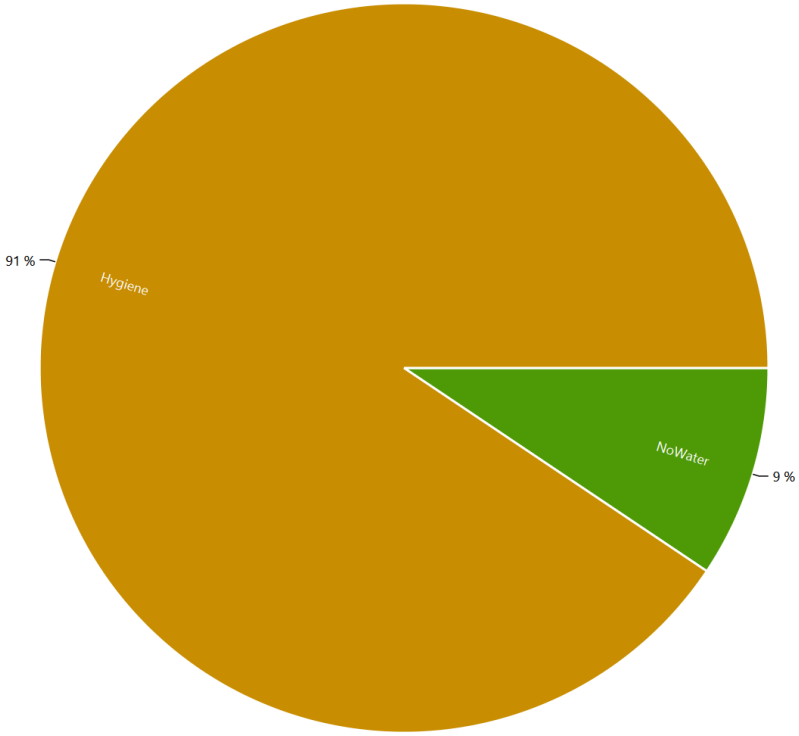
HH0 - Energieagentur - Electricity



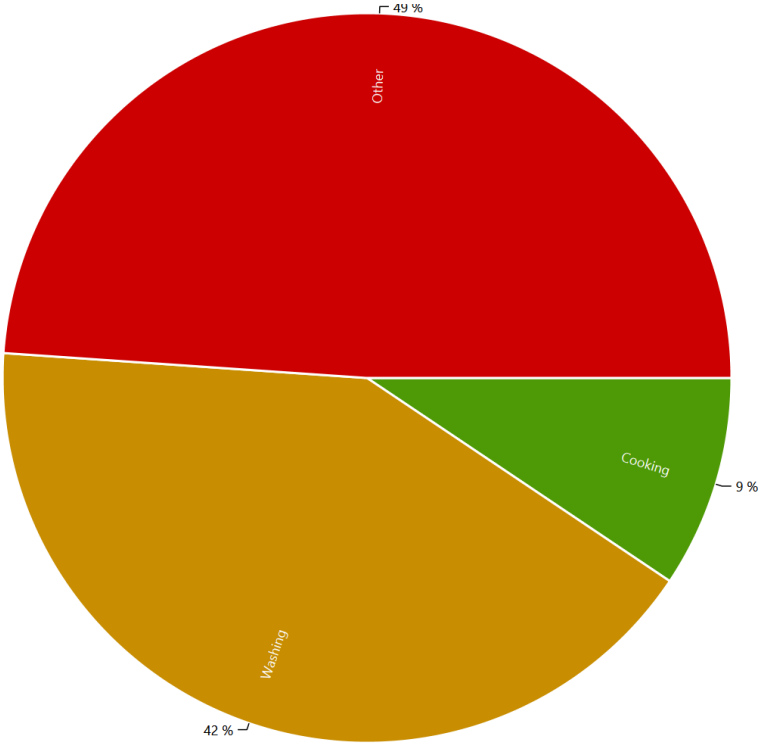
HH0 - Energieagentur - Electricity



HH0 - Destatis Water Usage Statistics - Warm Water



HH0 - Energieagentur - Warm Water

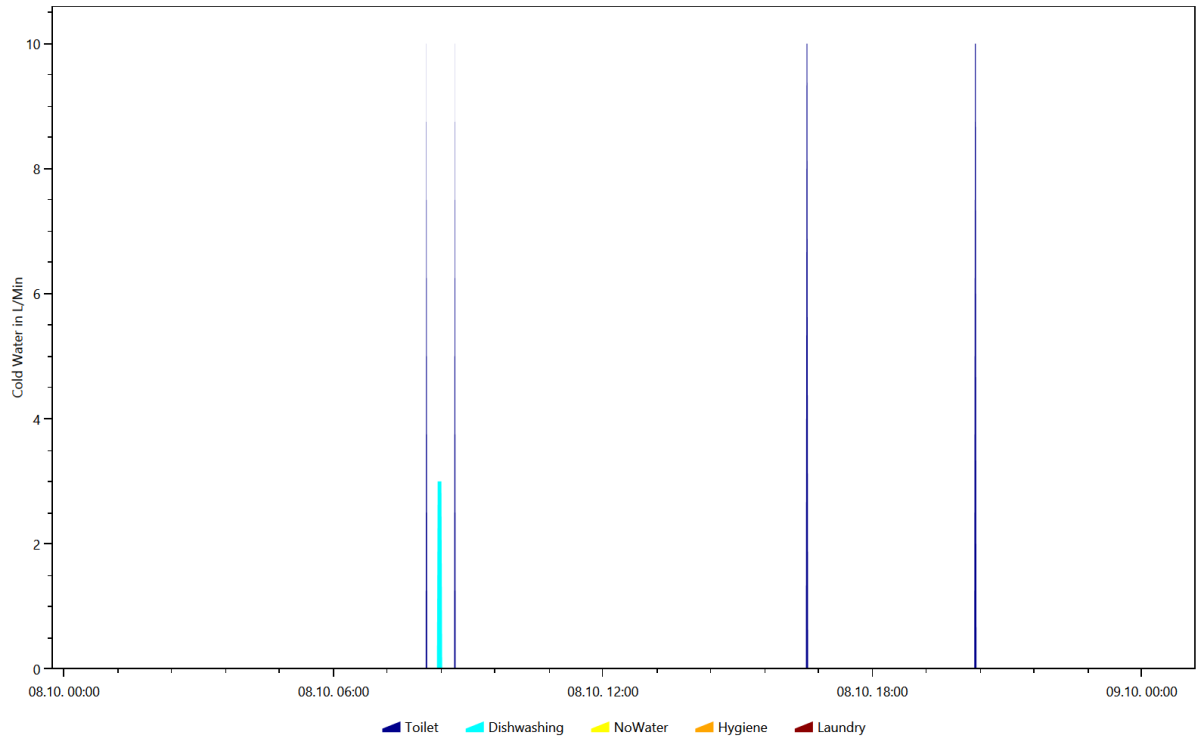


Example of the device profiles for each load type

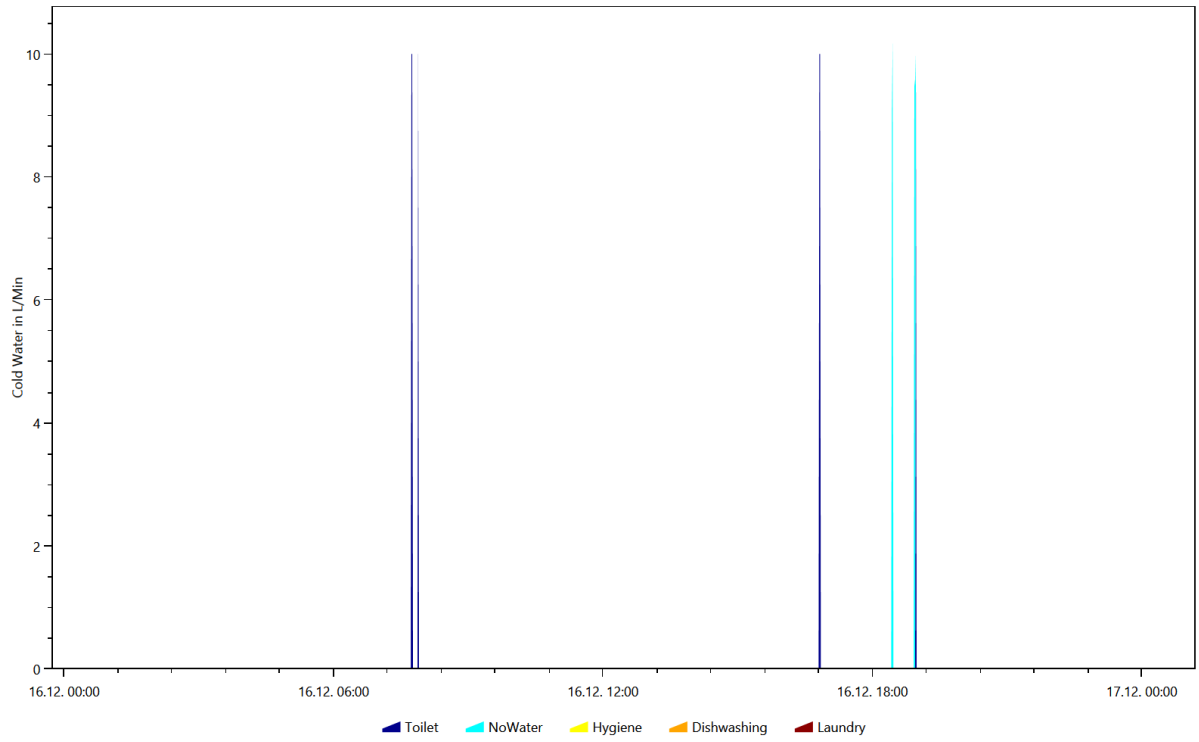
This is made from the files starting with: DeviceProfiles

The device profile files are the reason for the LPG. They show the power consumption of each device.

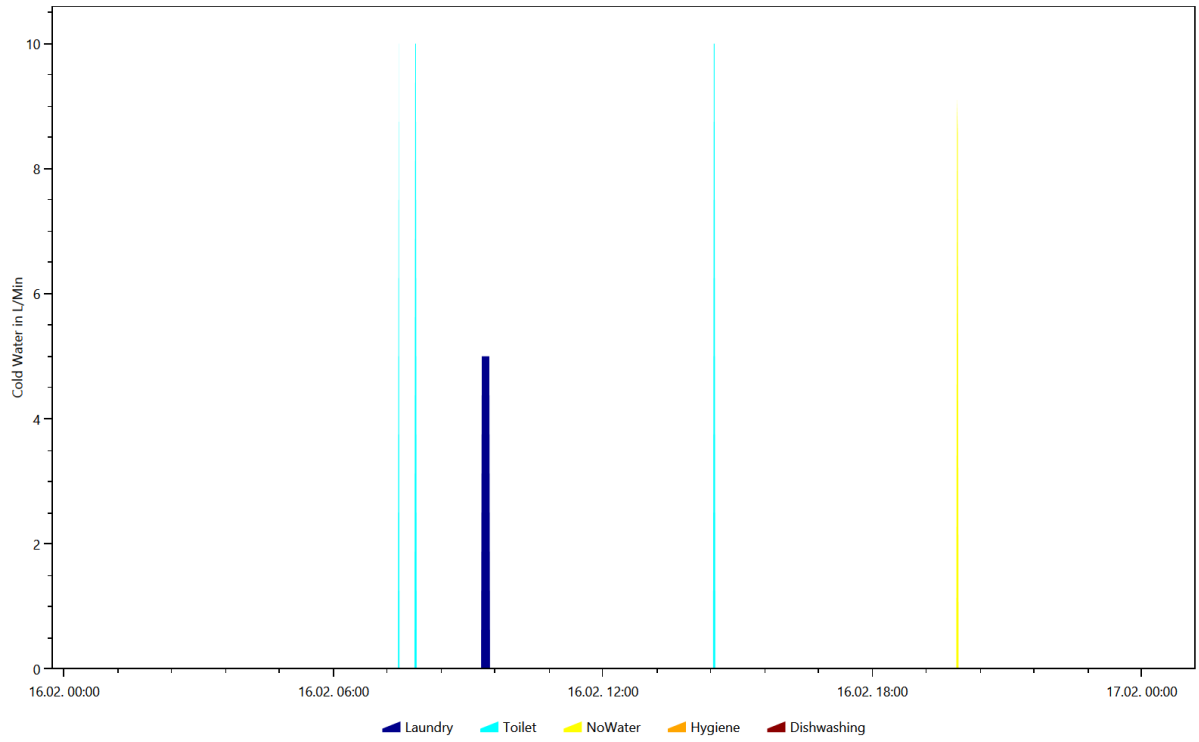
Cold Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.10.8



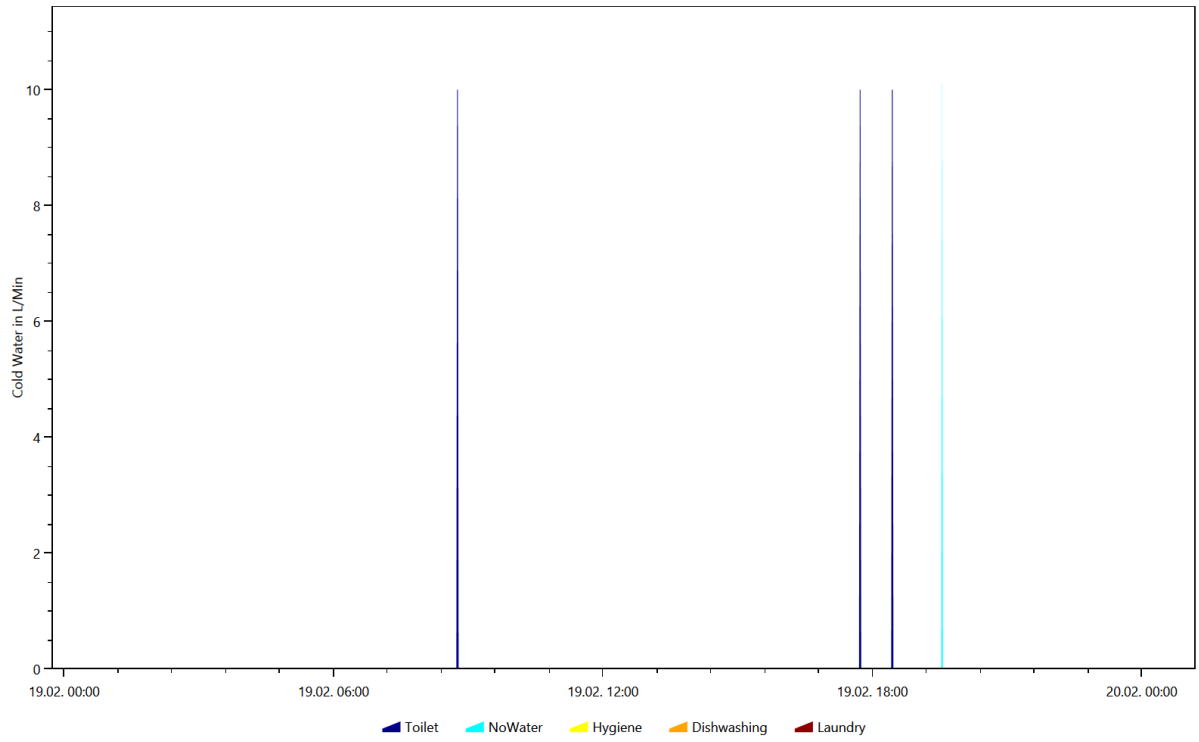
Cold Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.12.16



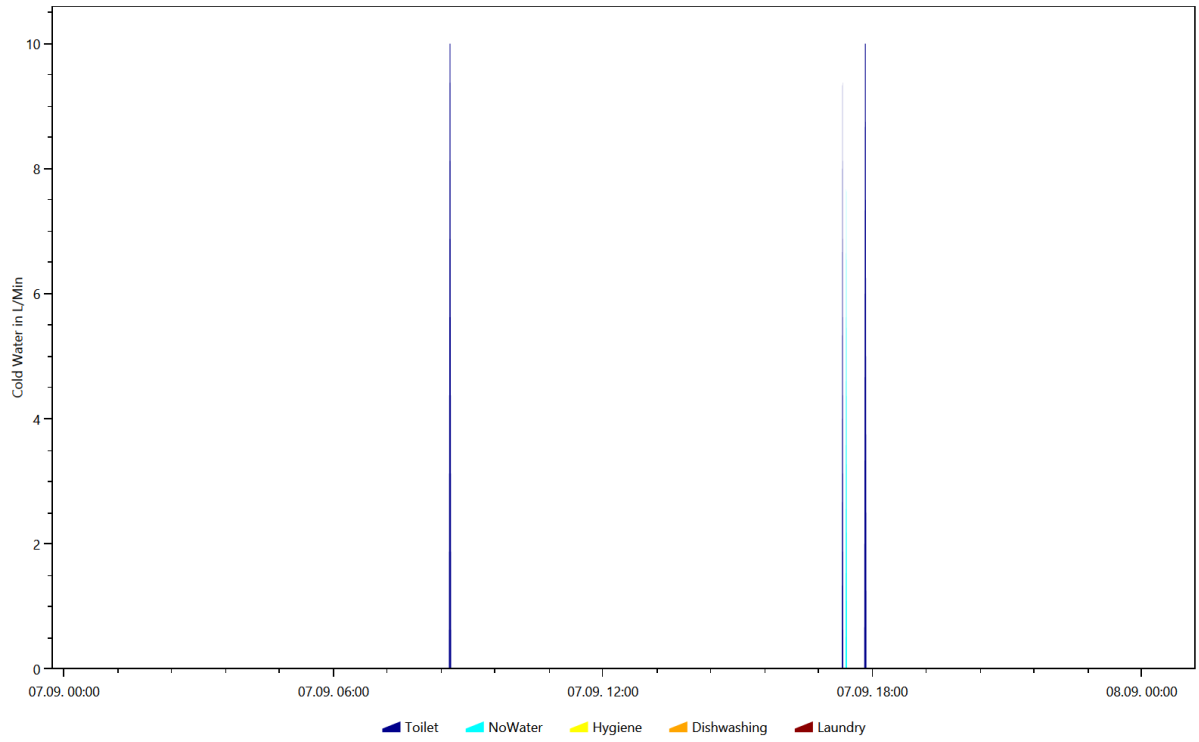
Cold Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.2.16



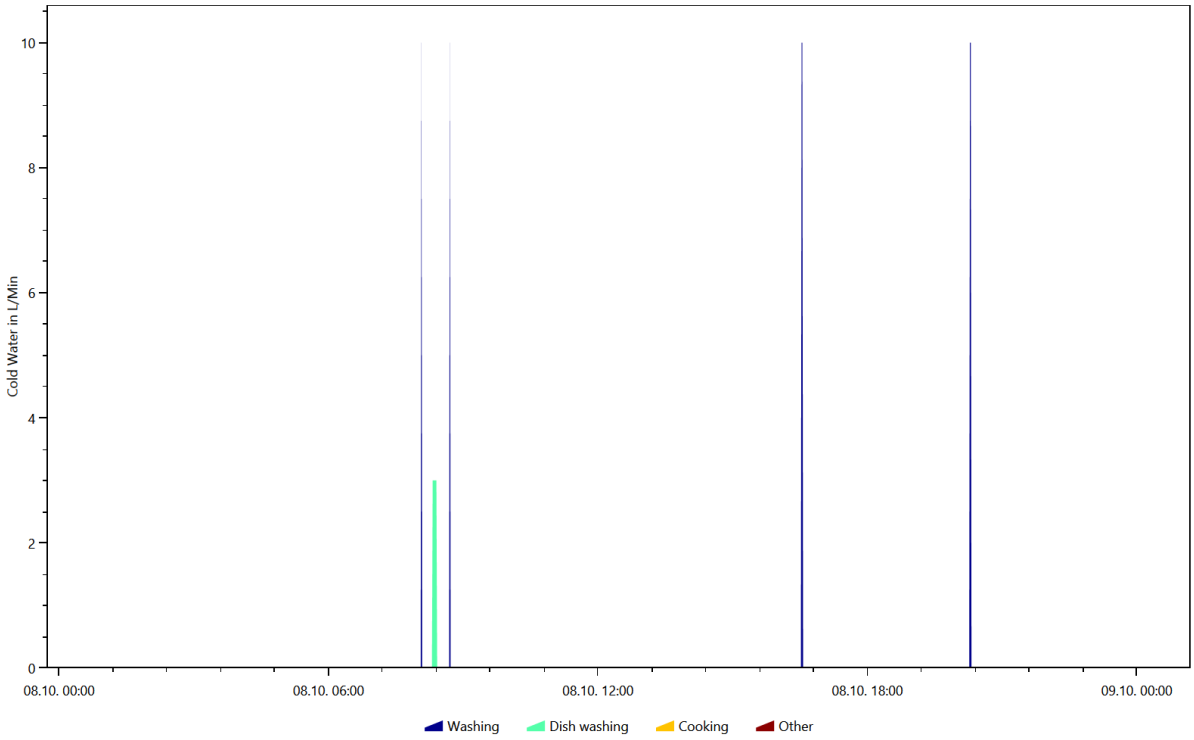
Cold Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.2.19



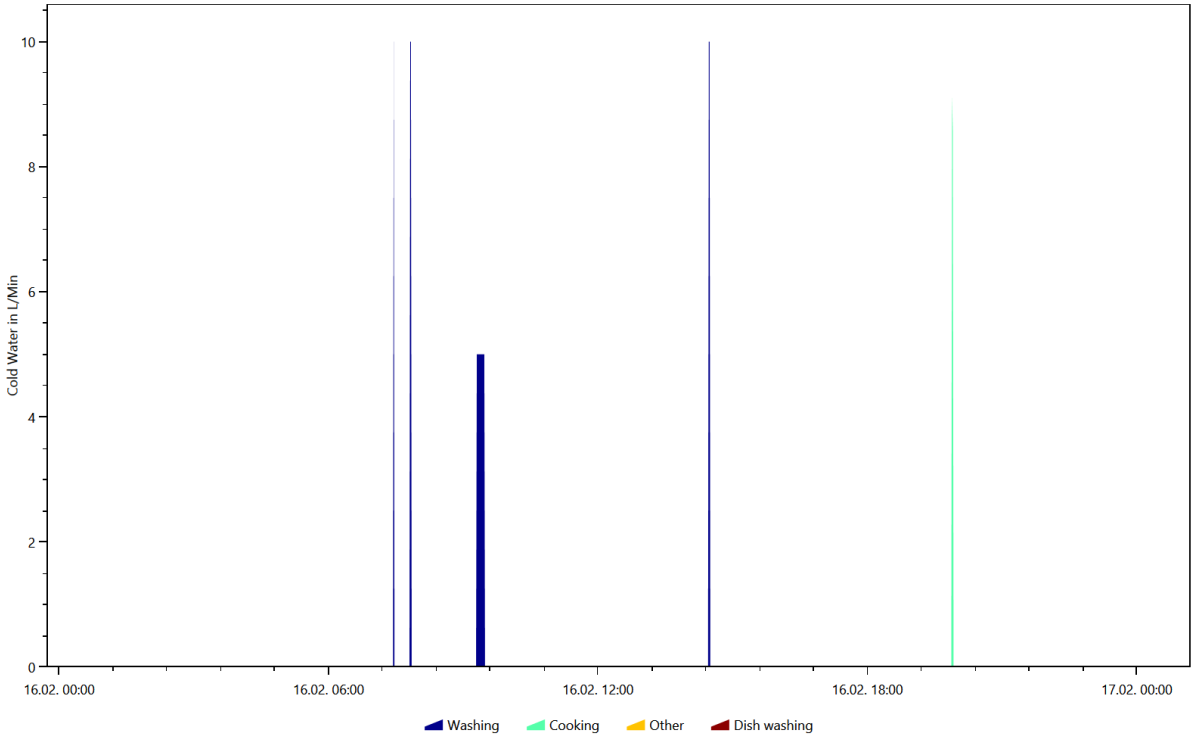
Cold Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.9.7



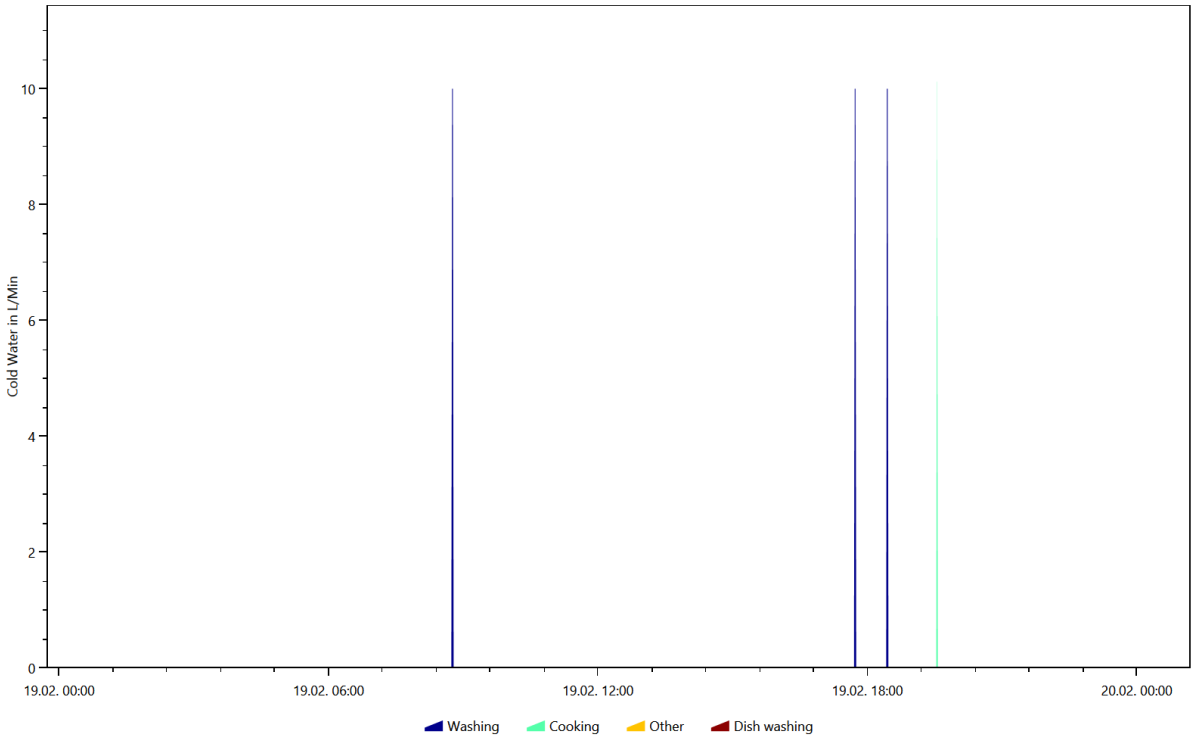
Cold Water, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.10.8



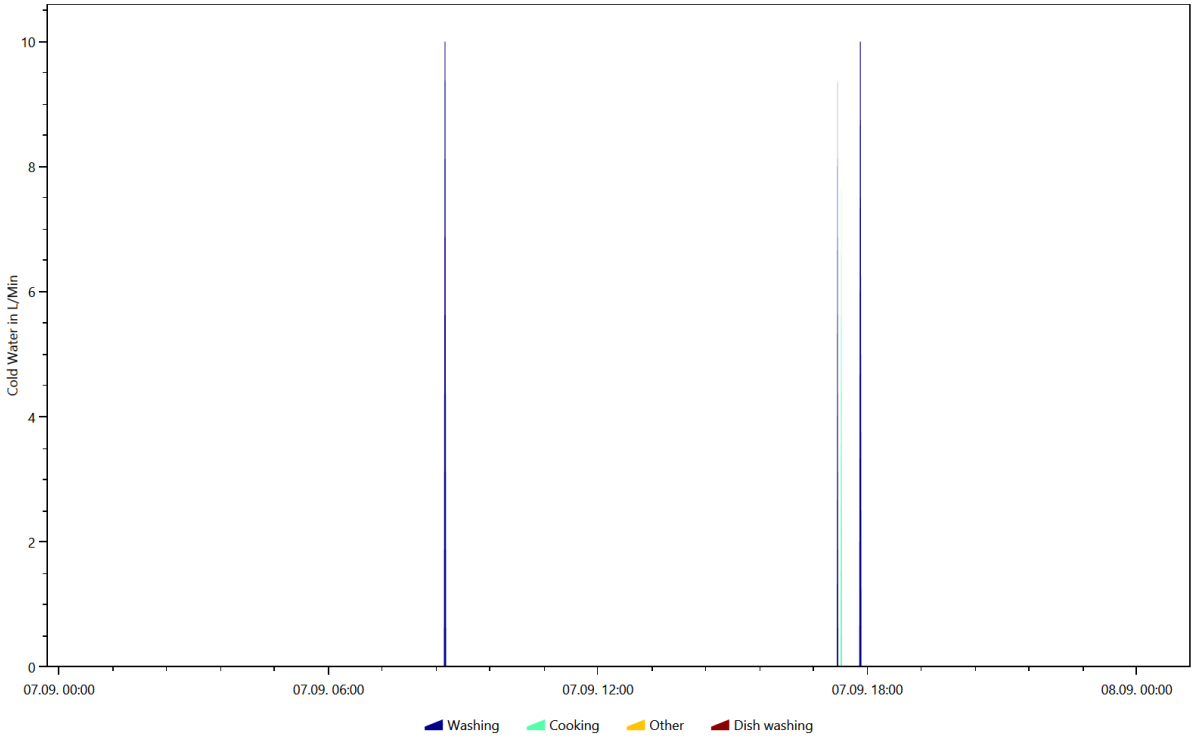
Cold Water, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.2.16



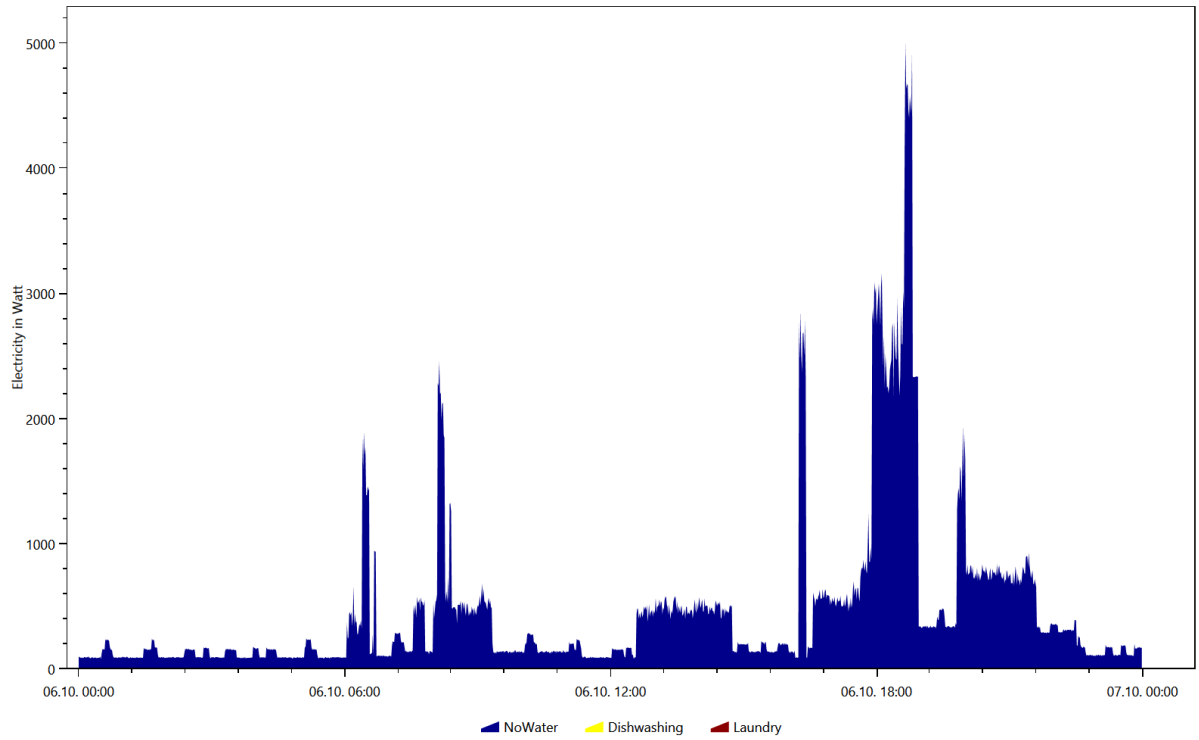
Cold Water, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.2.19



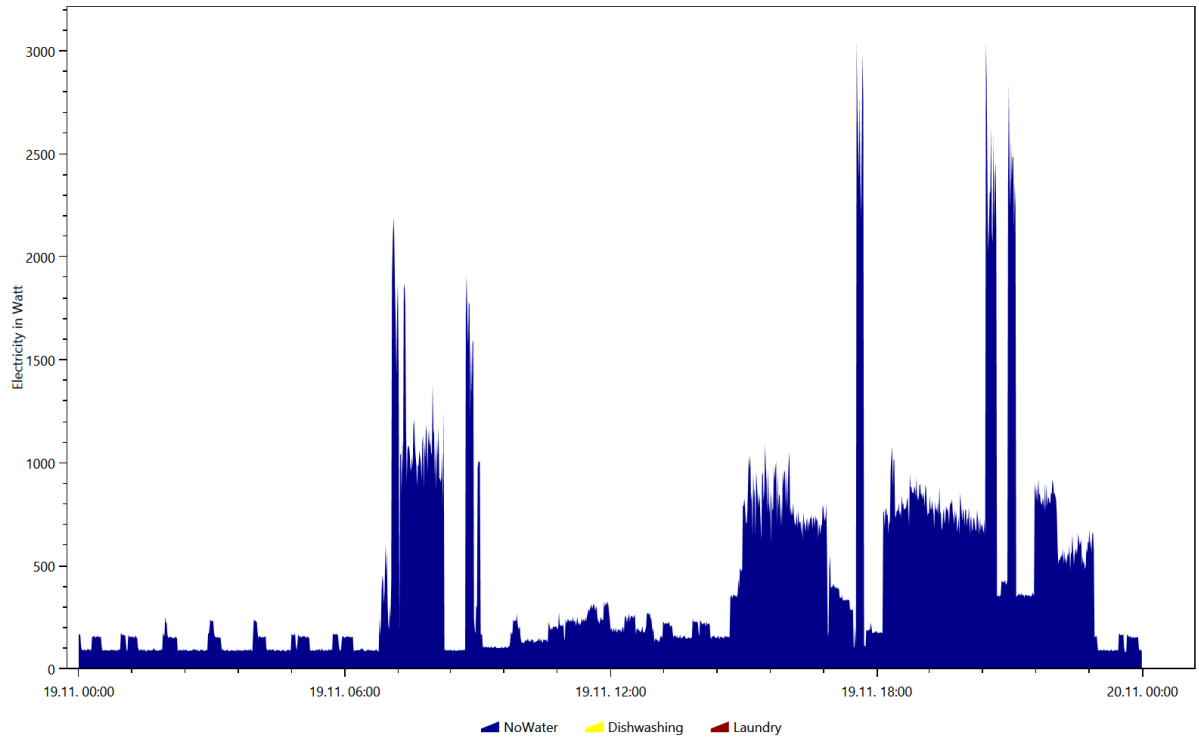
Cold Water, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.9.7



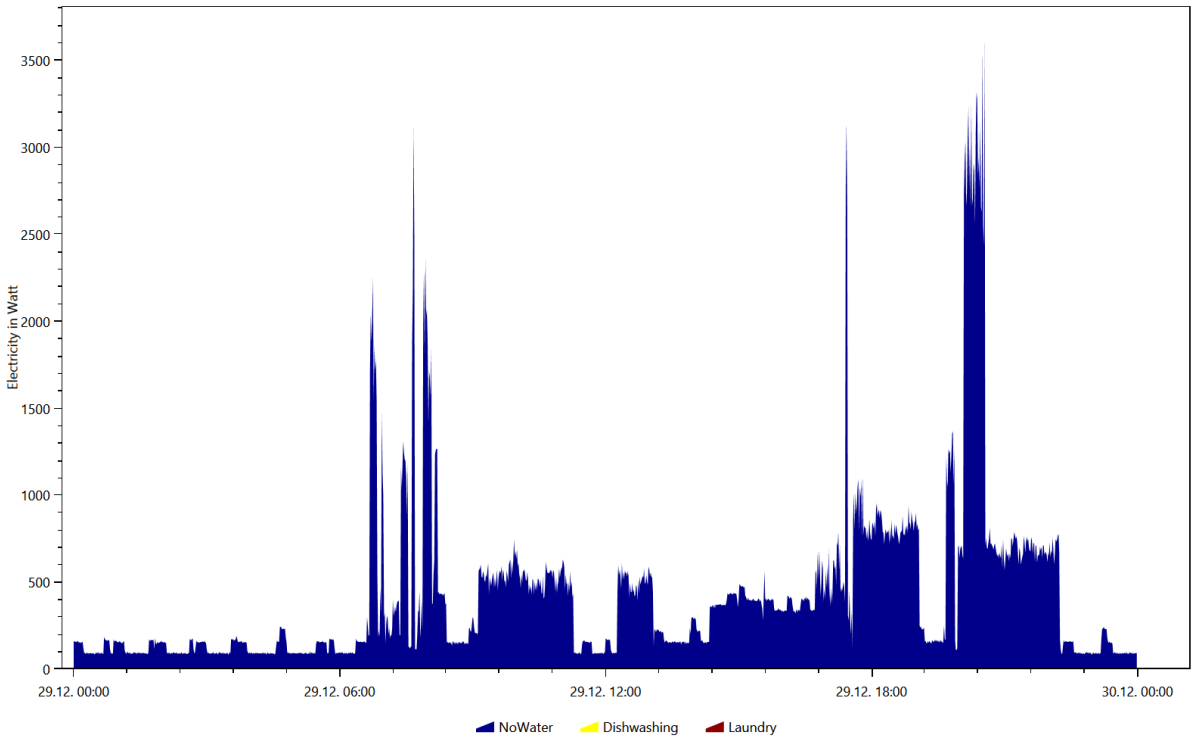
Electricity, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.10.6



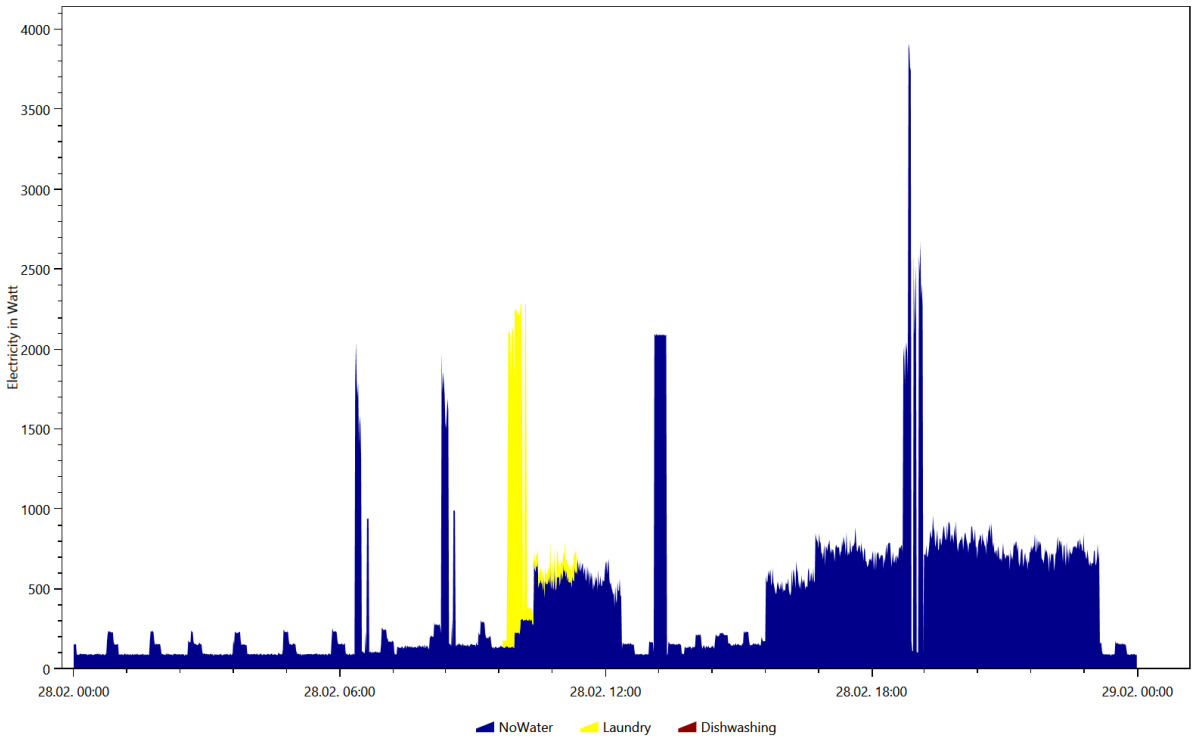
Electricity, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.11.19



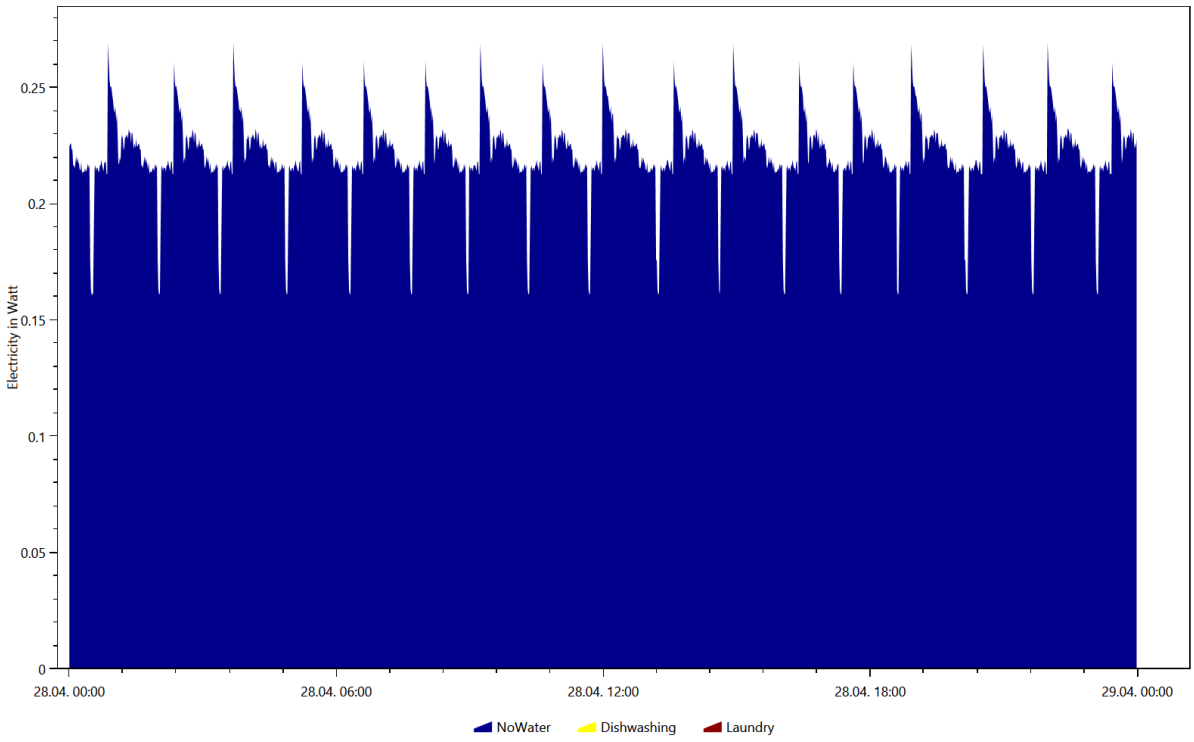
Electricity, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.12.29



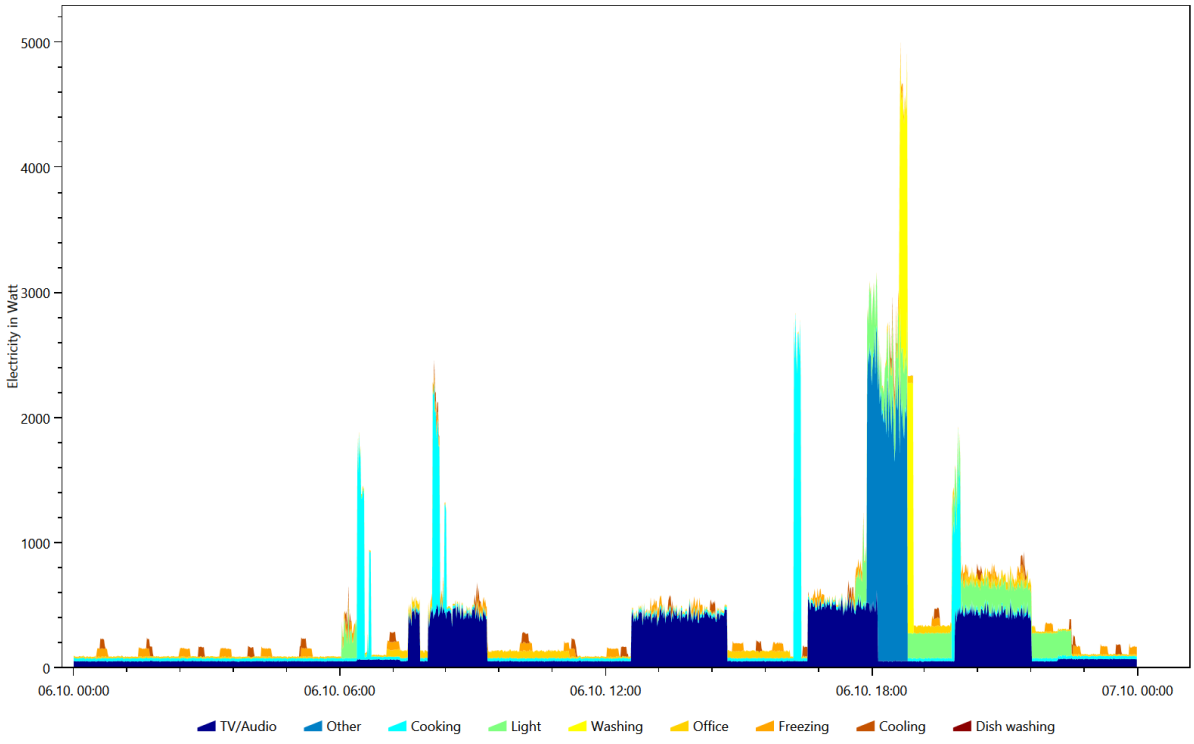
Electricity, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.2.28



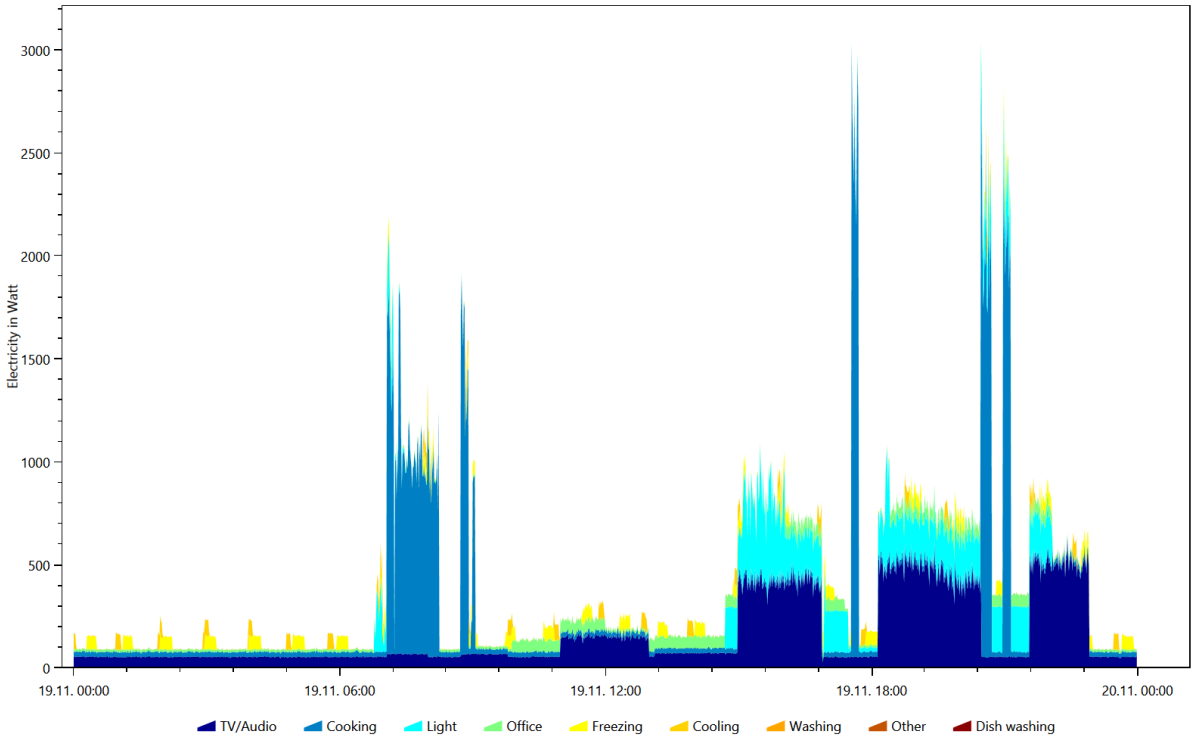
Electricity, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.4.28



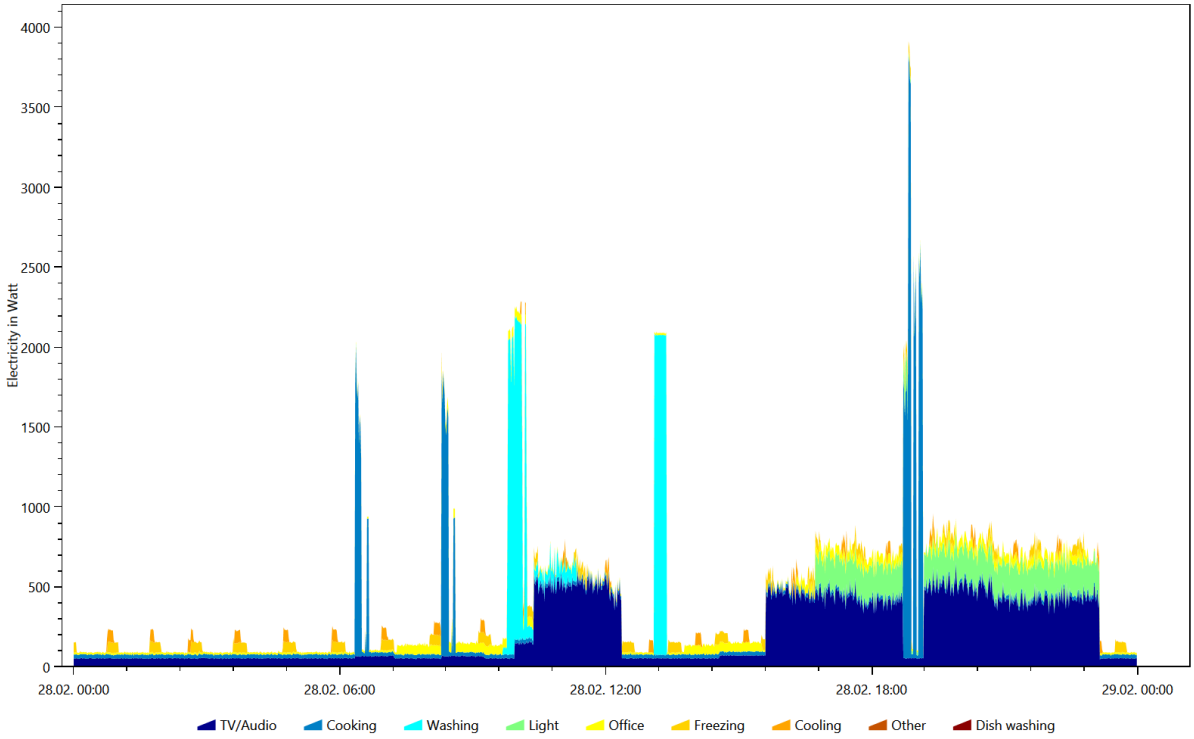
Electricity, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.10.6



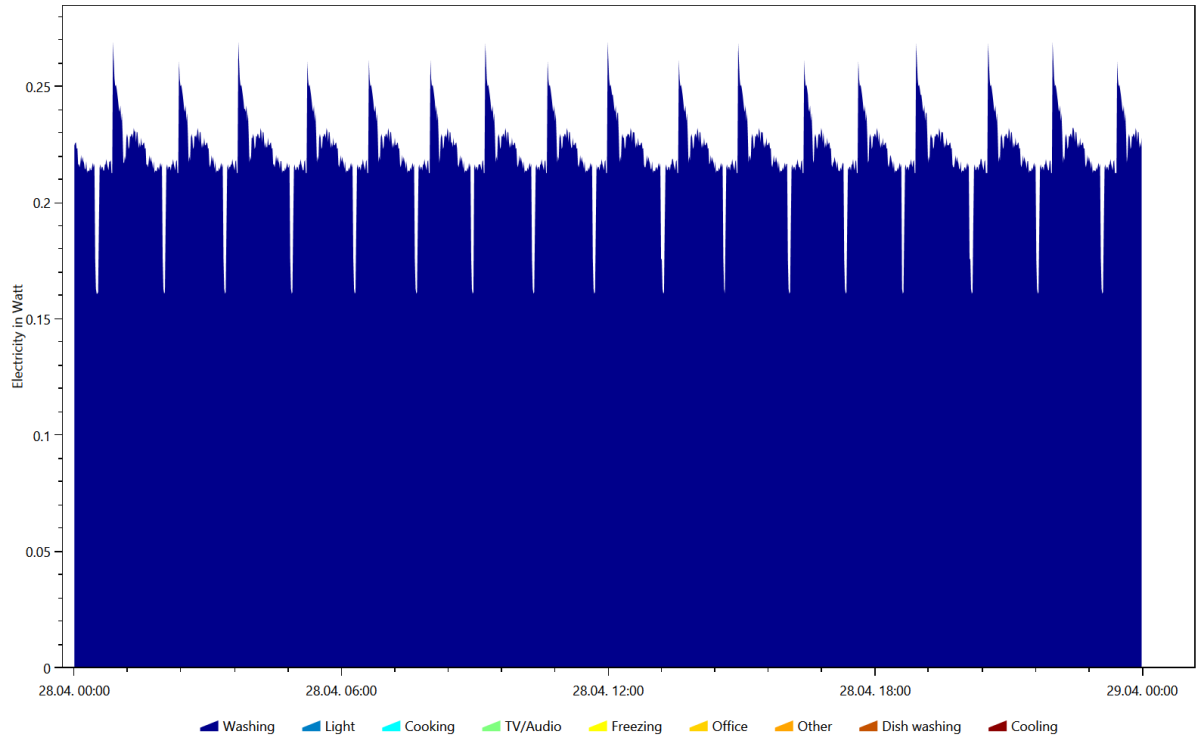
Electricity, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.11.19



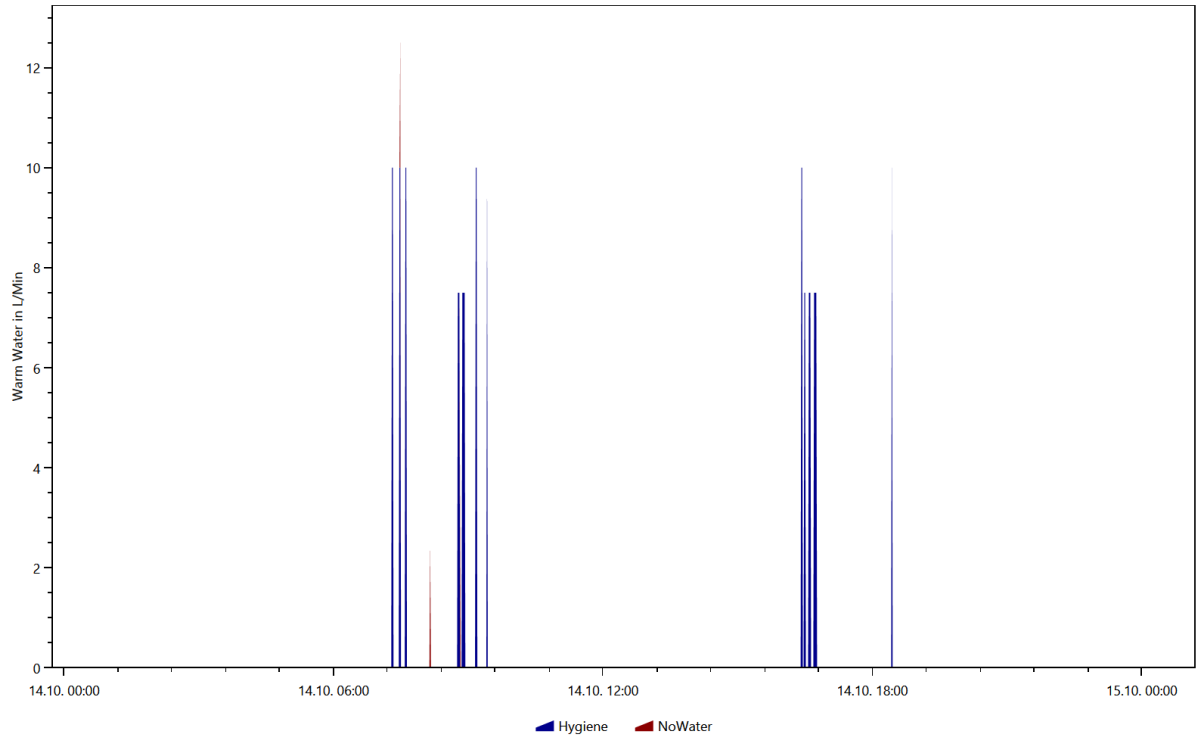
Electricity, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.2.28



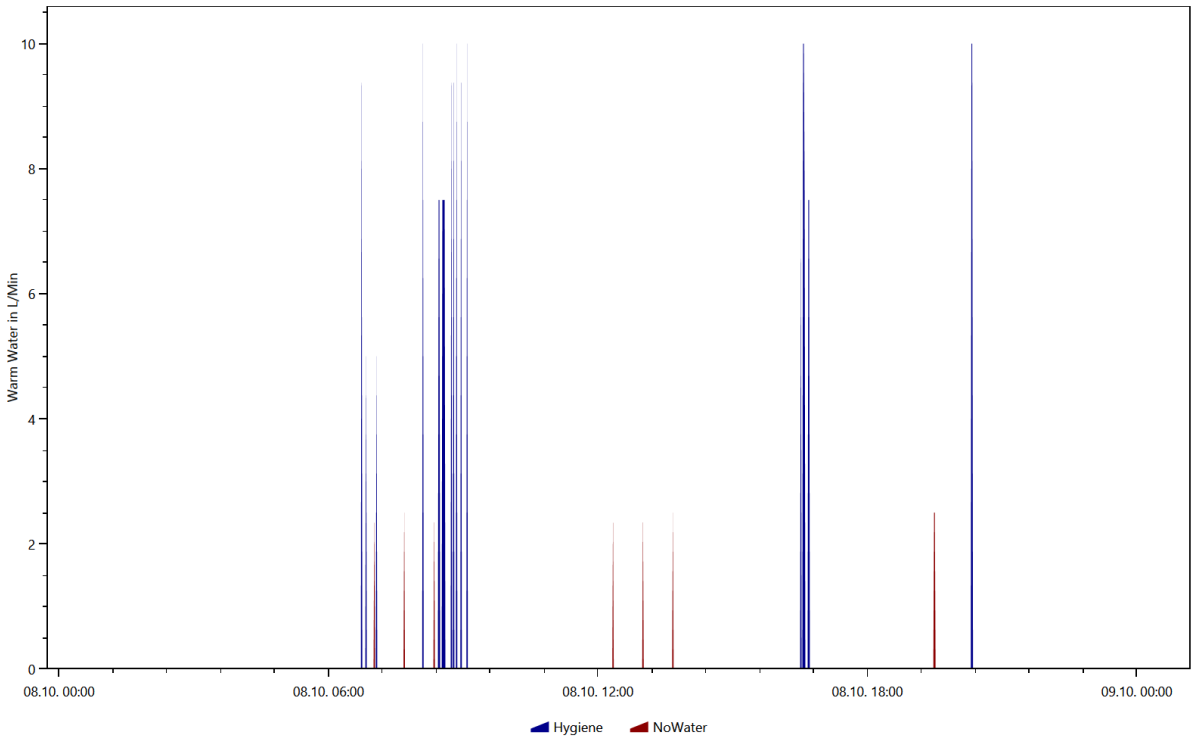
Electricity, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.4.28



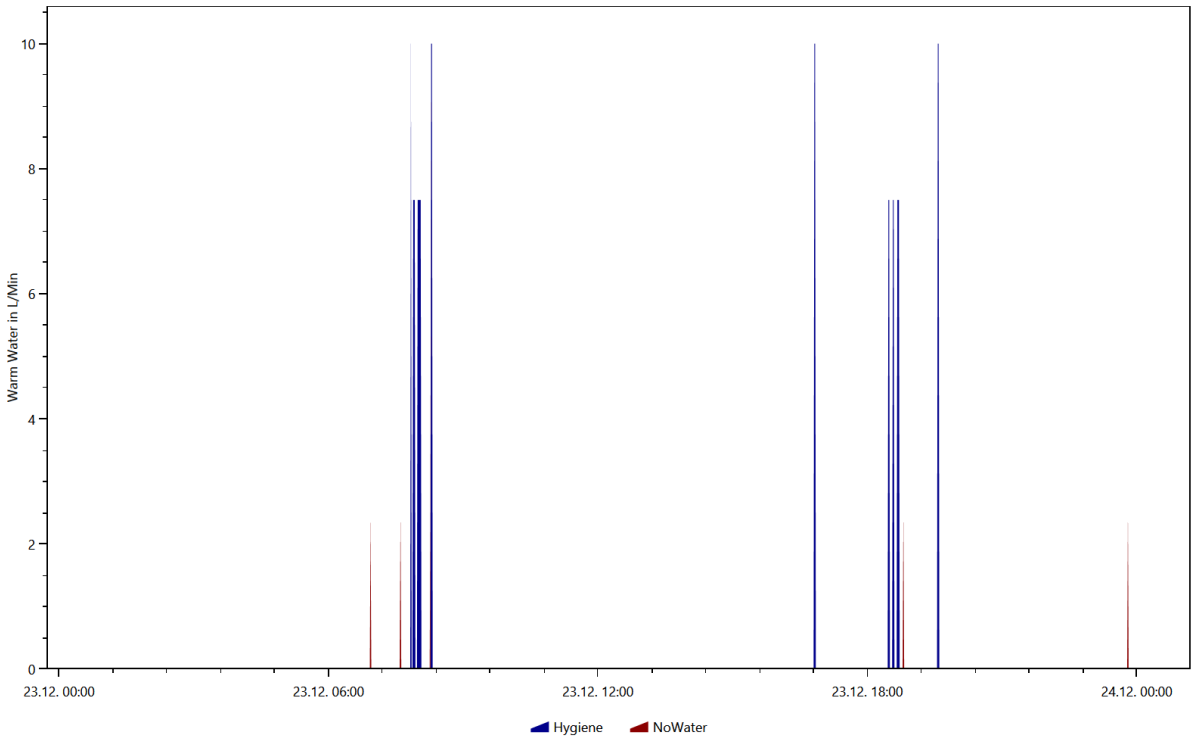
Warm Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.10.14



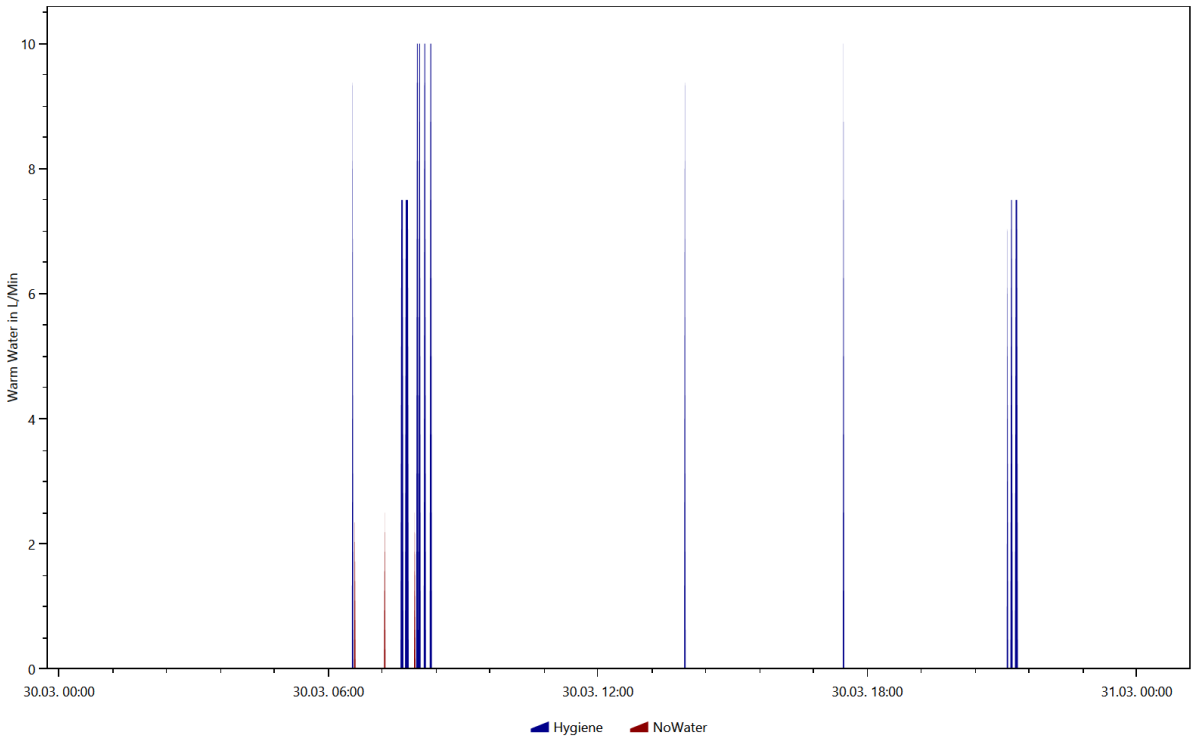
Warm Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.10.8



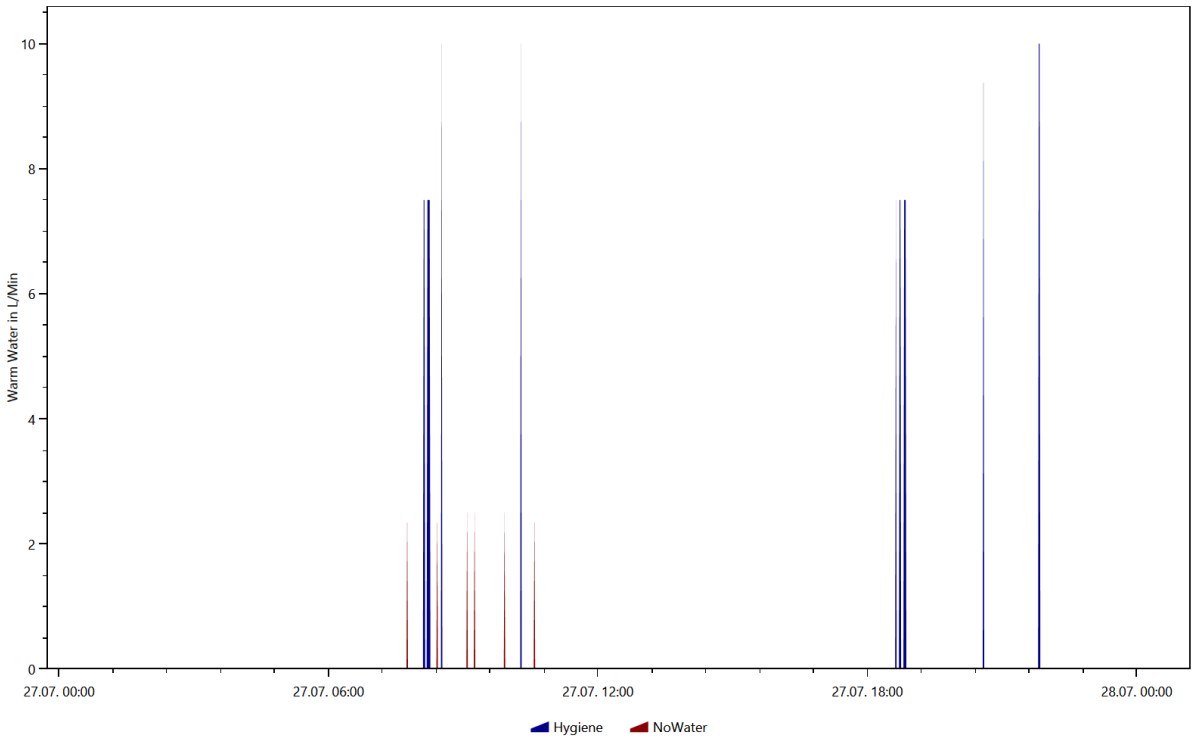
Warm Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.12.23



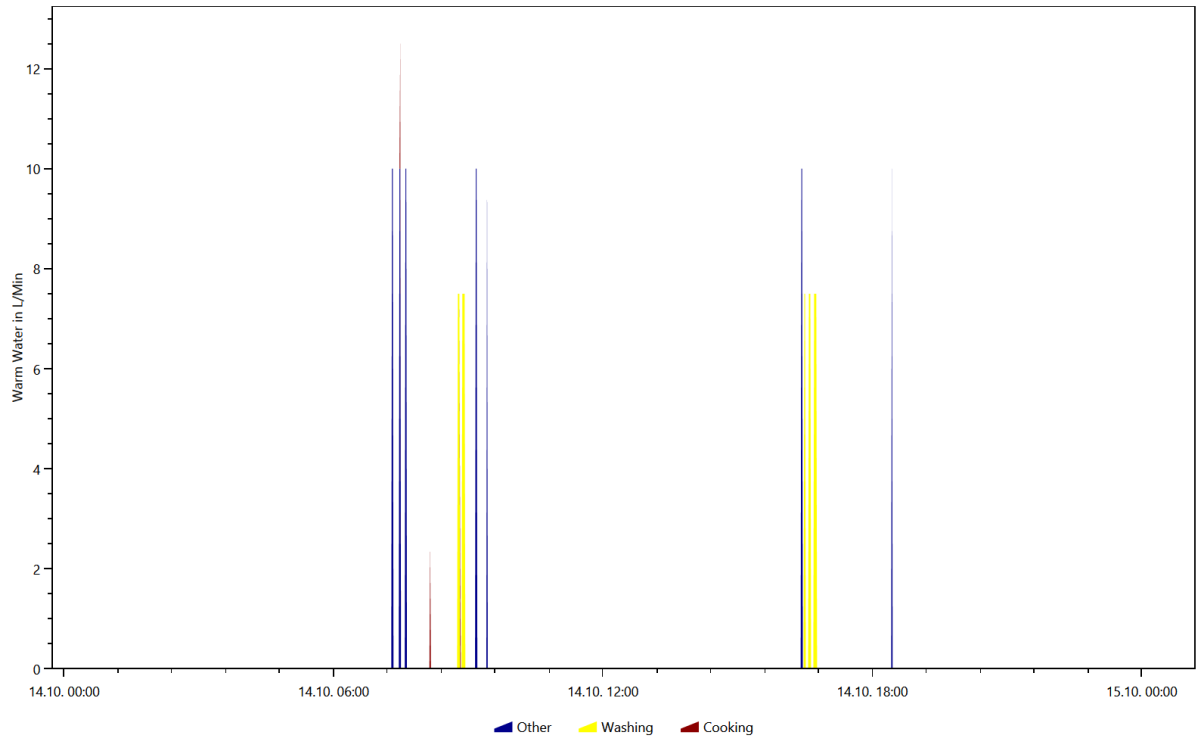
Warm Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.3.30



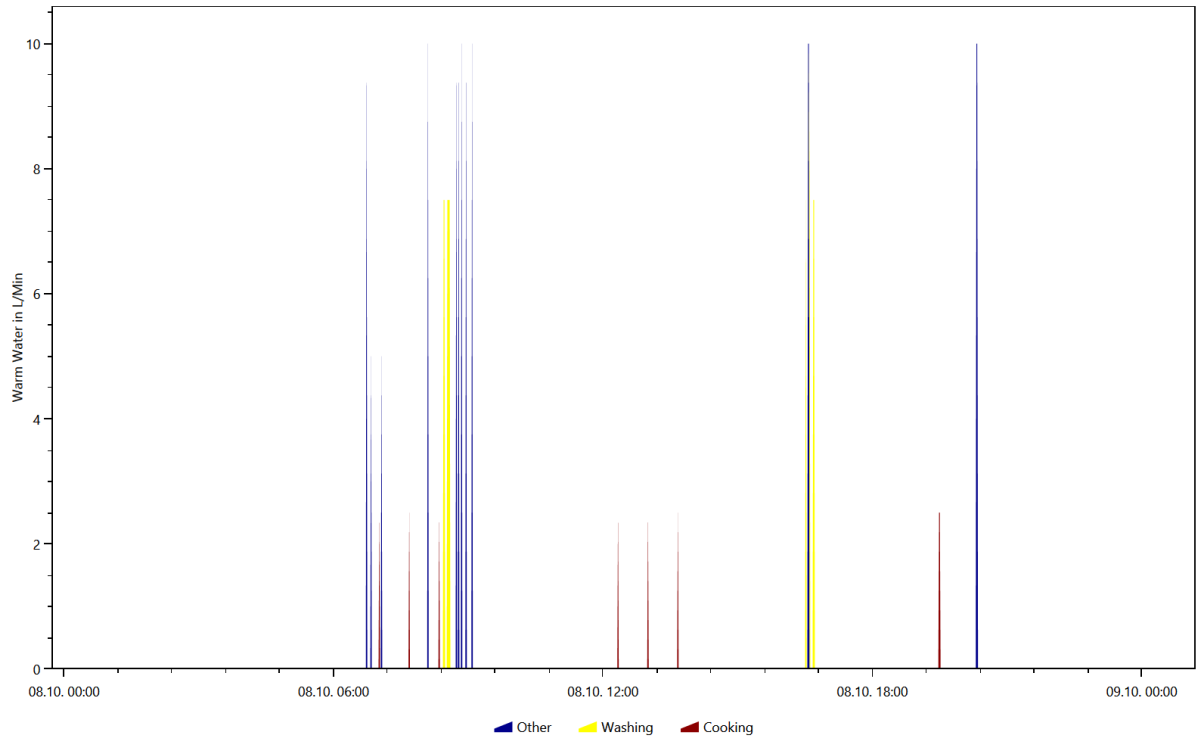
Warm Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.7.27



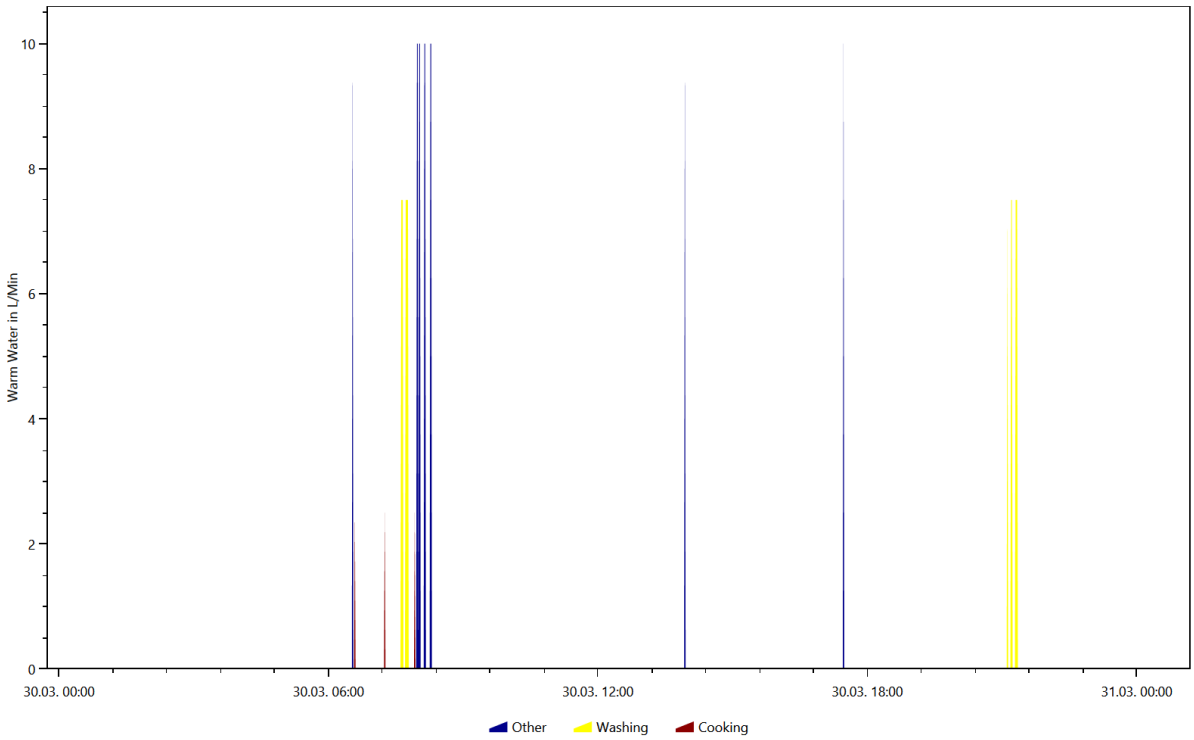
Warm Water, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.10.14



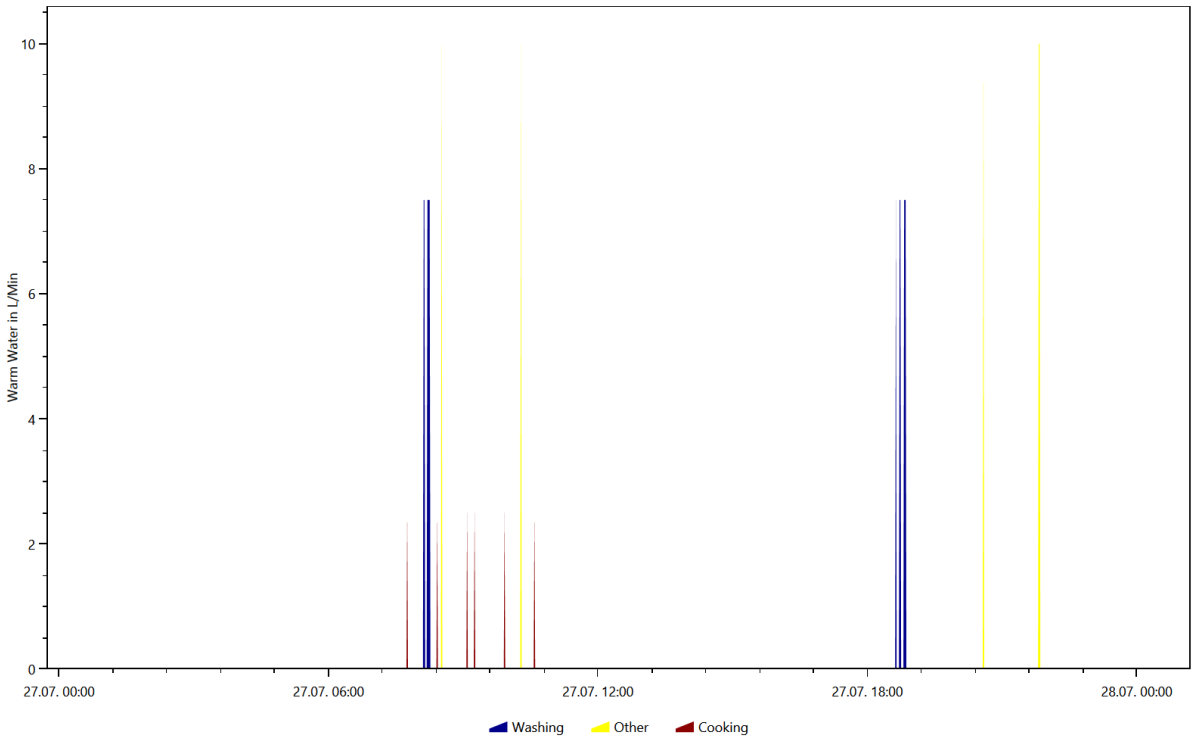
Warm Water, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.10.8



Warm Water, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.3.30



Warm Water, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.7.27

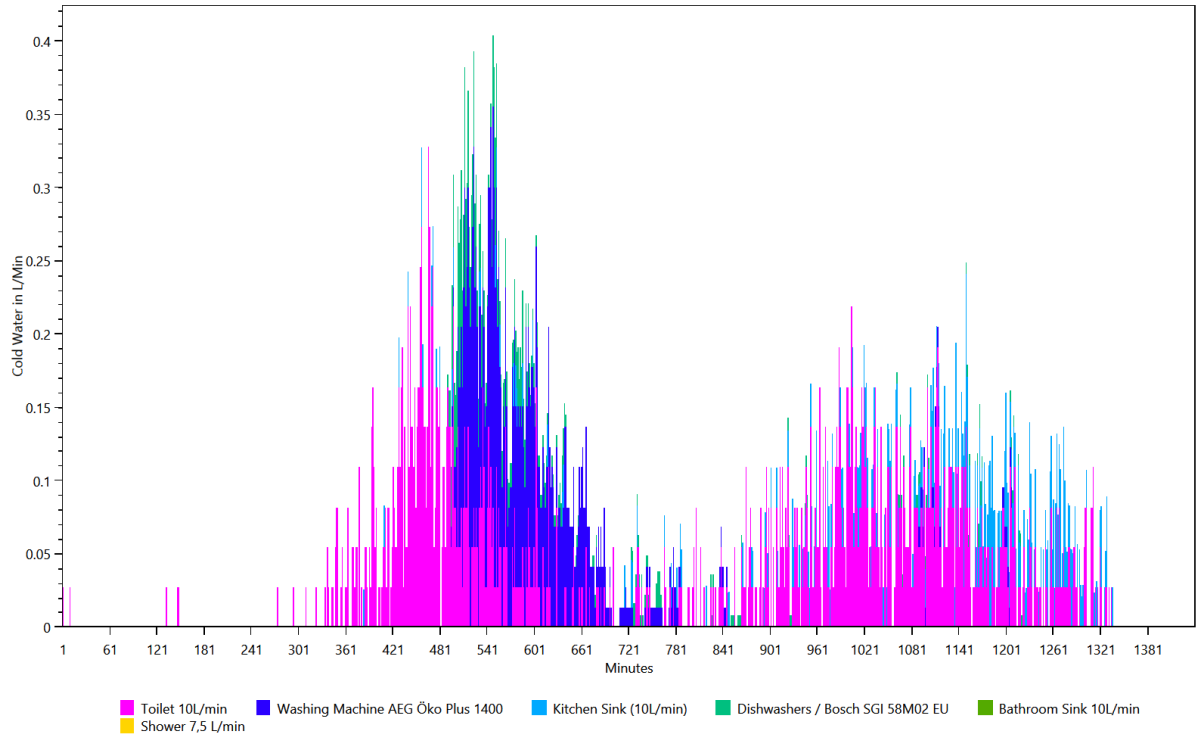


Overview of the time and power of the use per load type per device

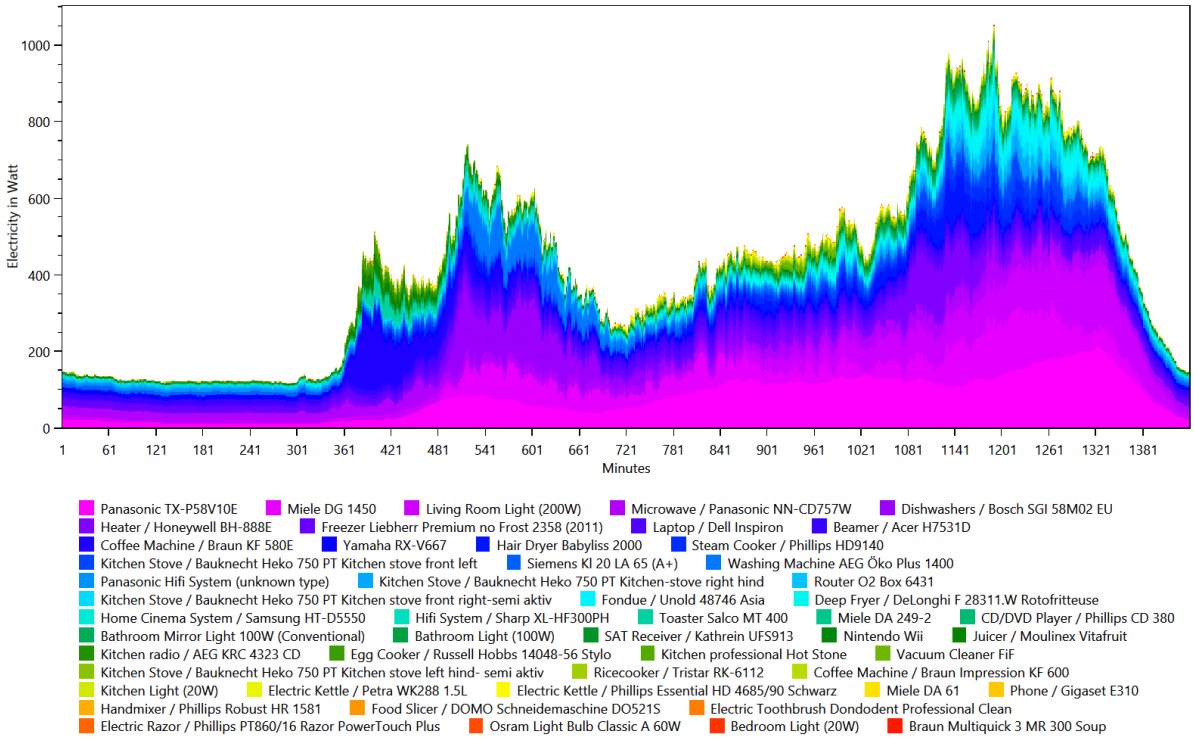
This is made from the files starting with: TimeOfUseEnergyProfiles

The time of use energy profiles show when each device was used and how much power it used.

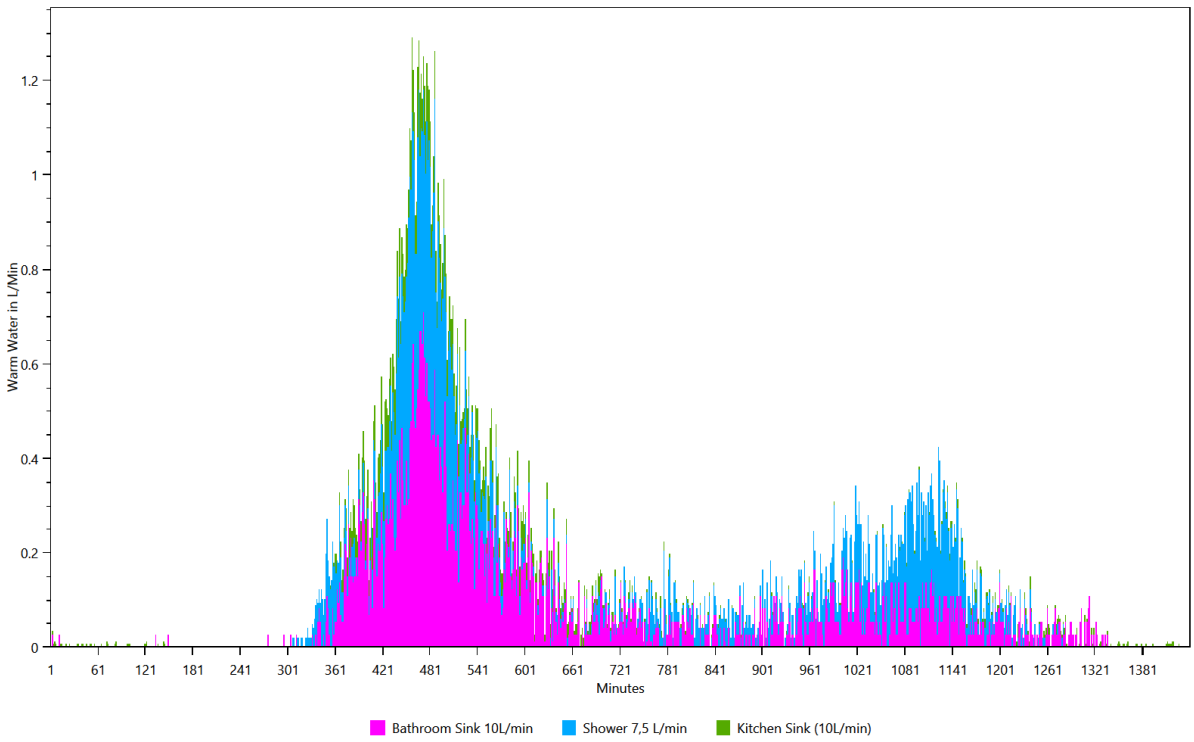
Cold Water



Electricity



Warm Water

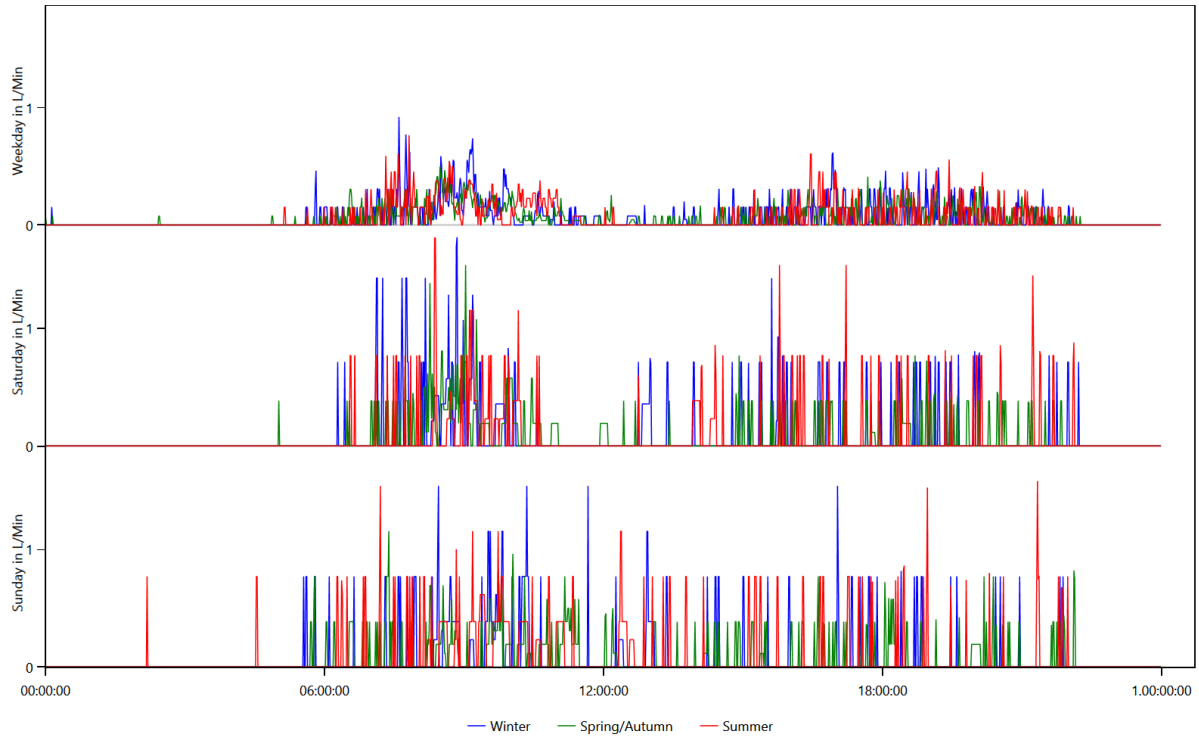


Energy use per load type during different seasons, split by weekday/saturday/sunday

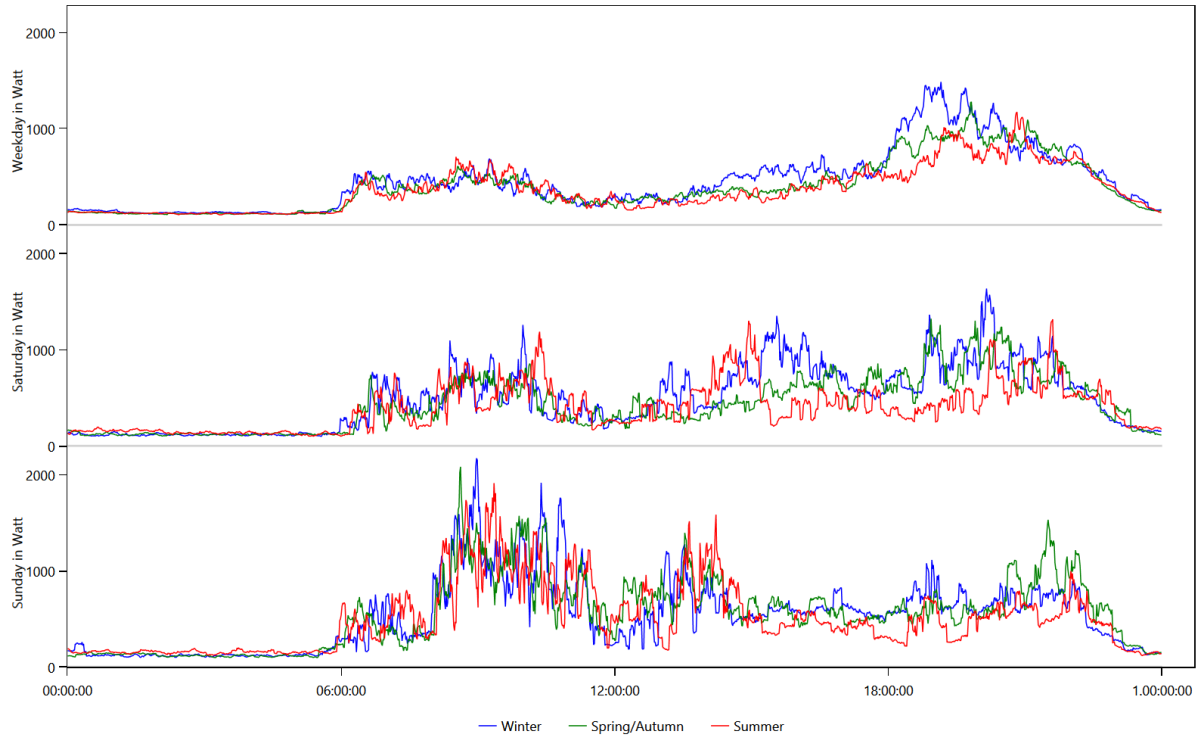
This is made from the files starting with: WeekdayProfiles

This graph shows for each load type the average power consumption per day grouped byseason and weekday/saturday/sunday.

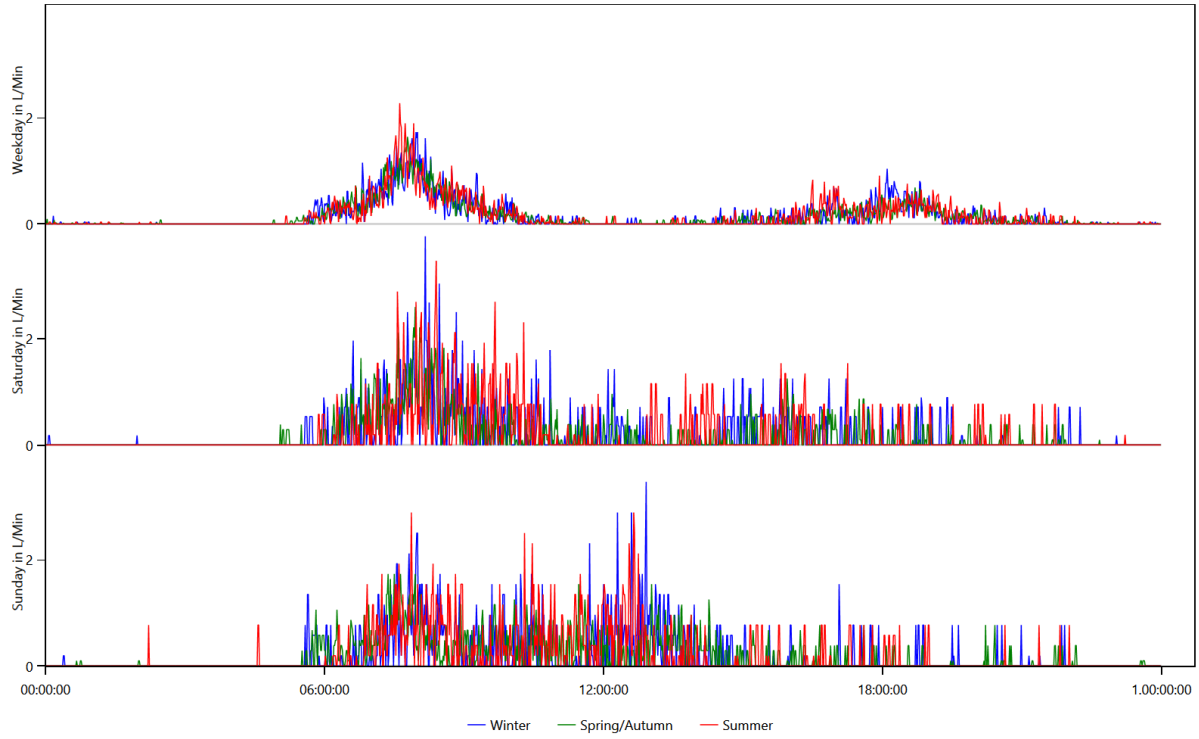
Cold Water



Electricity



Warm Water

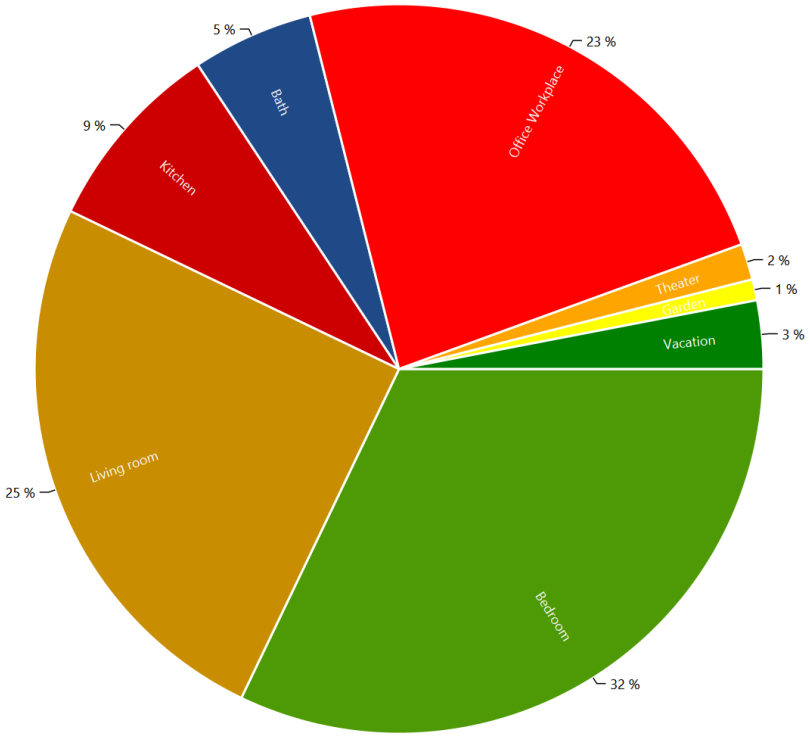


Location Distribution per Person

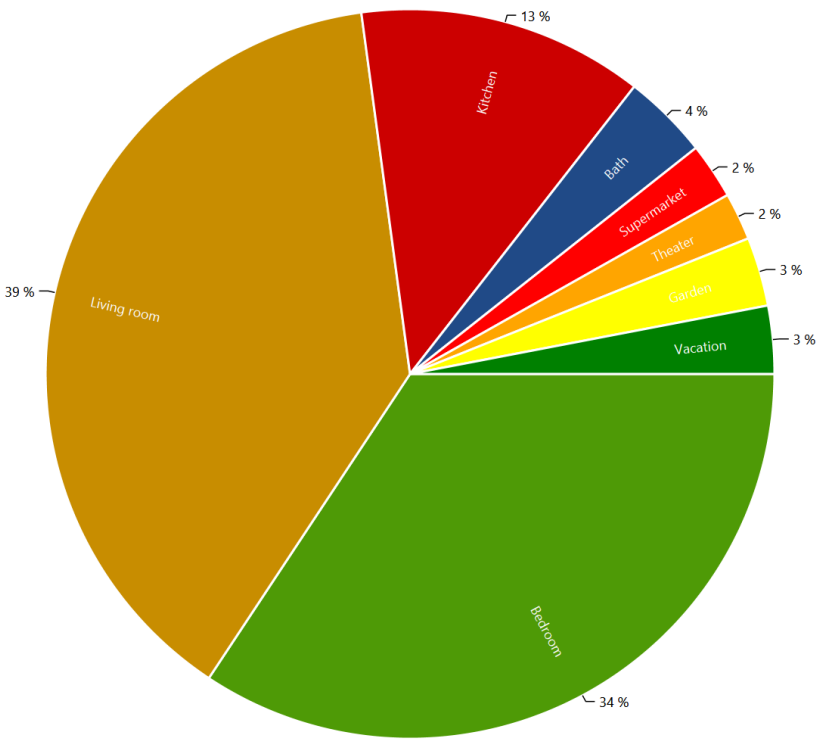
This is made from the files starting with: LocationStatistics

These charts show where the persons spend their time.

CHR34 Julia (25 Female)



CHR34 Romeo (26 Male)



Actions.csv

This is made from the files starting with: Actions

These files show the actions of each person in the household. The content looks like this:

Actions.HH0.csv

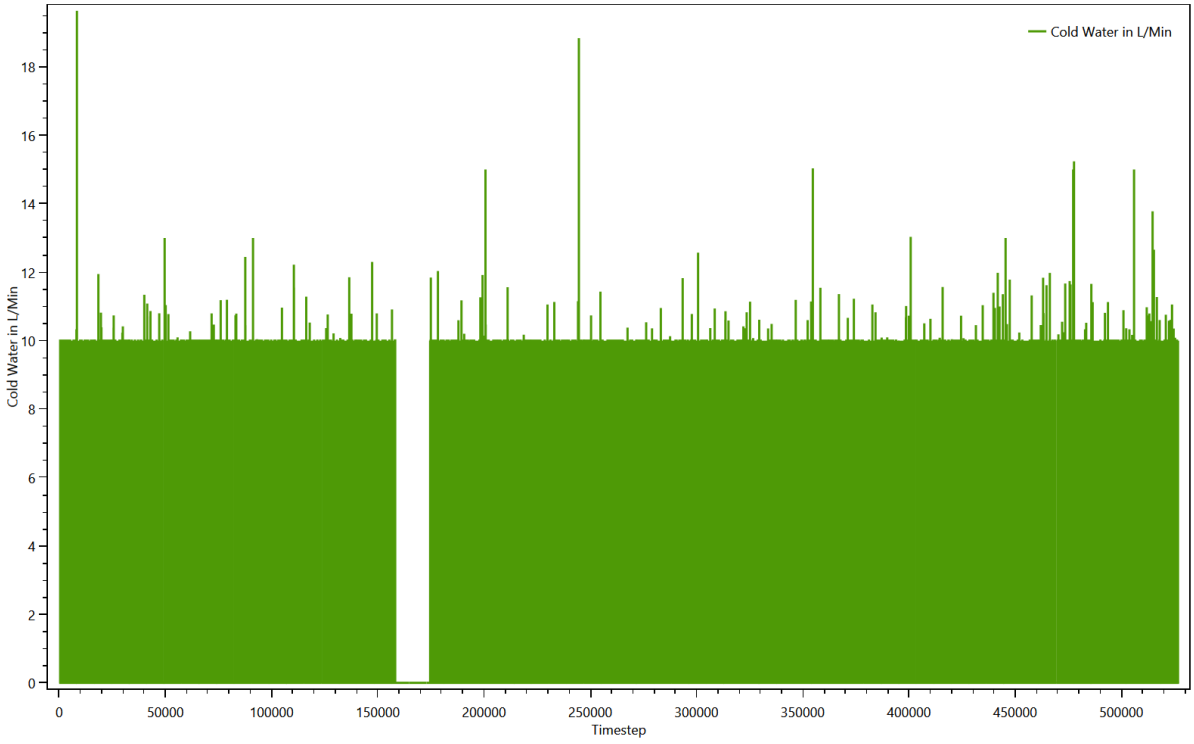
Time step;Calendertime;Person;Selected affordance;Affordance Category;Is Sick
0;01.01.2016 00:00;CHR34 Julia (25/Female);sleep bed 02 (08 h);sleep;False;
0;01.01.2016 00:00;CHR34 Romeo (26/Male);sleep bed 08 (08 h);sleep;False;
295;01.01.2016 04:55;CHR34 Julia (25/Female);use the laptop for Internet, Movie, Music, News (2 h);Active Entertainment (Computer, Internet etc);False;
420;01.01.2016 07:00;CHR34 Julia (25/Female);eat breakfast (1 h);cooking;False;
431;01.01.2016 07:11;CHR34 Romeo (26/Male);eat a cooked meal (interrupting) (eat breakfast (1 h));cooking;False;
478;01.01.2016 07:58;CHR34 Julia (25/Female);go to the toilet;hygiene;False;
478;01.01.2016 07:58;CHR34 Romeo (26/Male);take a shower (men);hygiene;False;
484;01.01.2016 08:04;CHR34 Julia (25/Female);listen to music on hifi (2 h);Passive Entertainment (TV etc.);False;
495;01.01.2016 08:15;CHR34 Romeo (26/Male);go to the toilet;hygiene;False;
501;01.01.2016 08:21;CHR34 Romeo (26/Male);do laundry at 30°C (by variable);cleaning;False;
517;01.01.2016 08:37;CHR34 Romeo (26/Male);eat breakfast (1 h);cooking;False;
585;01.01.2016 09:45;CHR34 Romeo (26/Male);rest for 10 min;sleep;False;
596;01.01.2016 09:56;CHR34 Romeo (26/Male);play board games (1 h);Offline Entertainment;False;
619;01.01.2016 10:19;CHR34 Julia (25/Female);take a nap;sleep;False;
652;01.01.2016 10:52;CHR34 Romeo (26/Male);hang up laundry outside;cleaning;False;
680;01.01.2016 11:20;CHR34 Romeo (26/Male);take a nap;sleep;False;
691;01.01.2016 11:31;CHR34 Julia (25/Female);use the laptop (1 h);Active Entertainment (Computer, Internet etc);False;
742;01.01.2016 12:22;CHR34 Romeo (26/Male);clean the bath;cleaning;False;
754;01.01.2016 12:34;CHR34 Julia (25/Female);play Wii;Passive Entertainment (TV etc.);False;

Sum Profiles

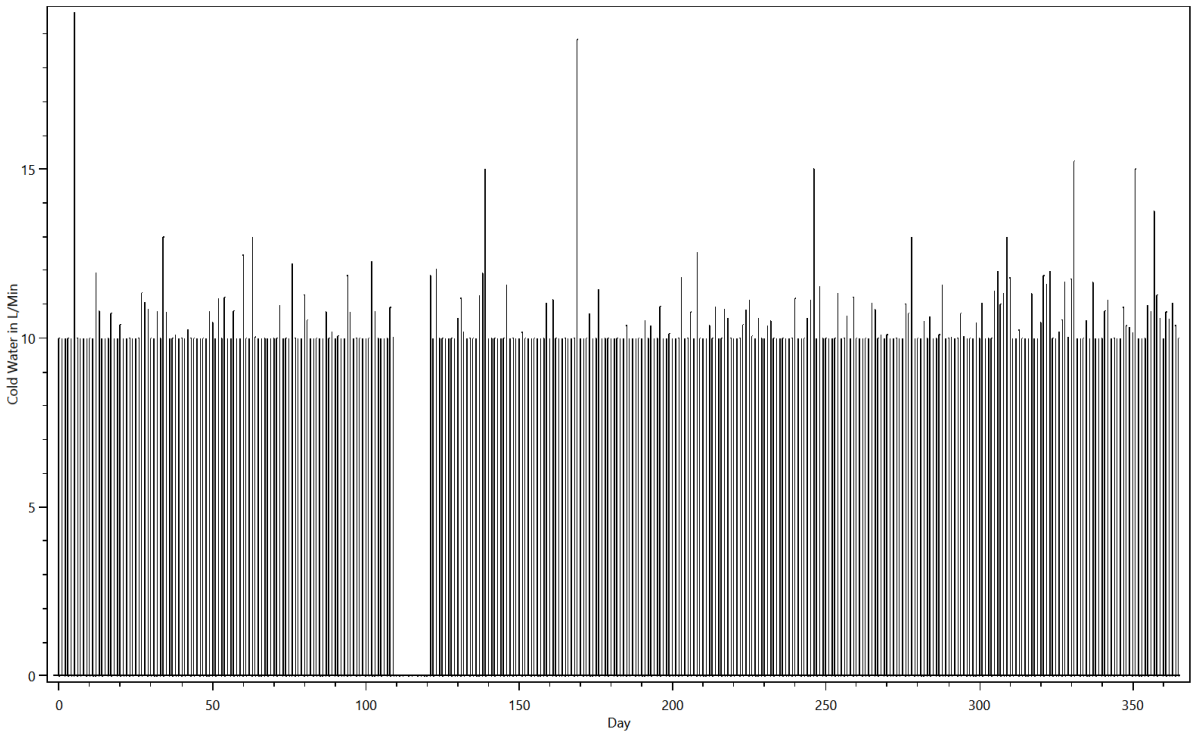
This is made from the files starting with: SumProfiles

This shows the energy use during the simulation.

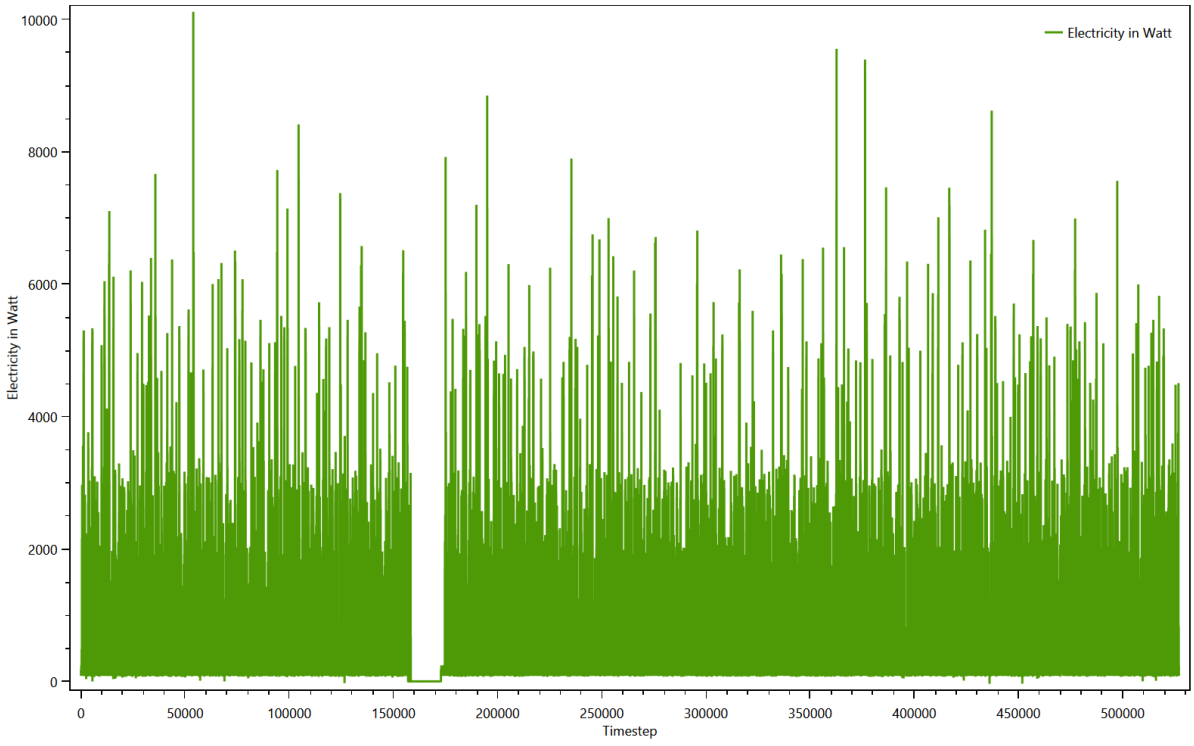
Summed up curve for Cold Water from SumProfiles.Cold Water.png



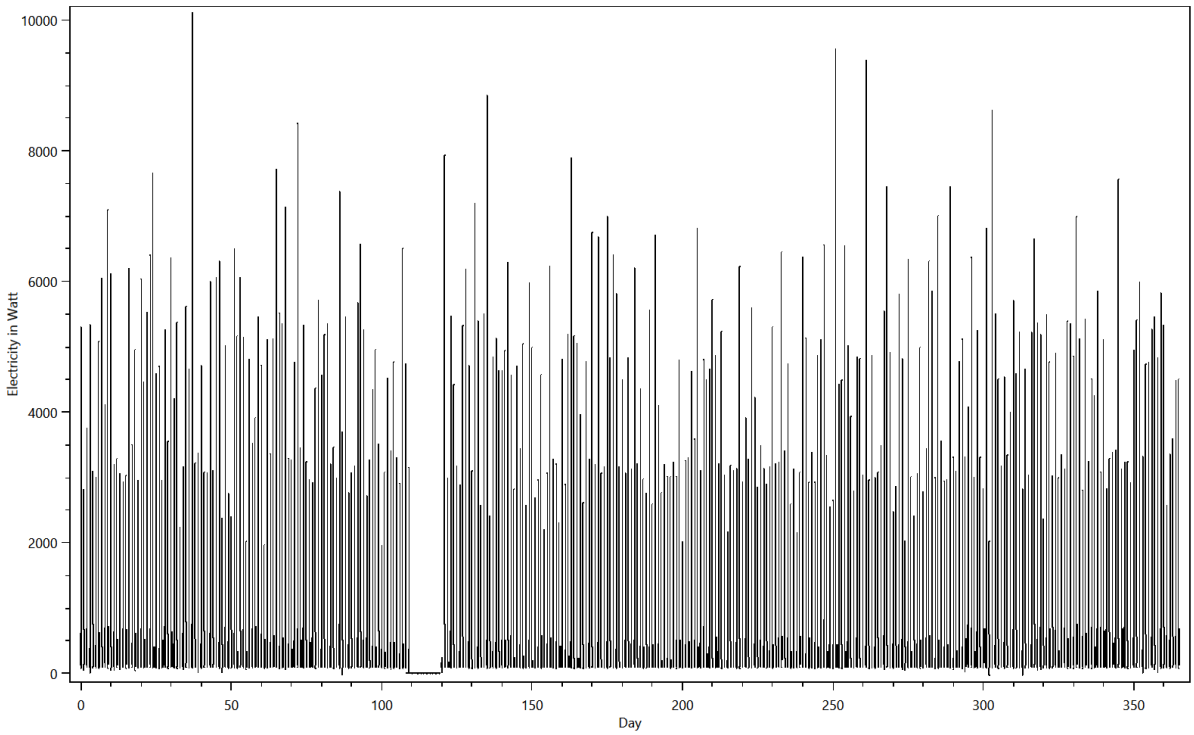
Summed up curve for Cold WaterMinMax from SumProfiles.Cold WaterMinMax..png



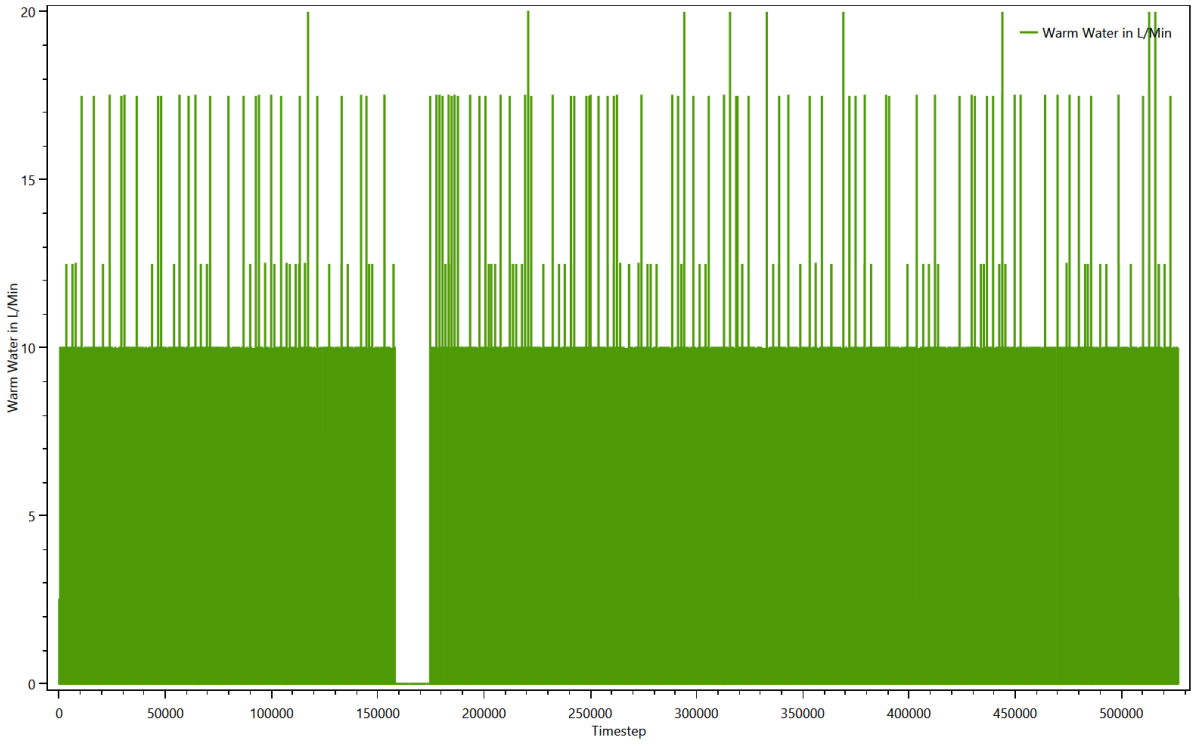
Summed up curve for Electricity from SumProfiles.Electricity.png



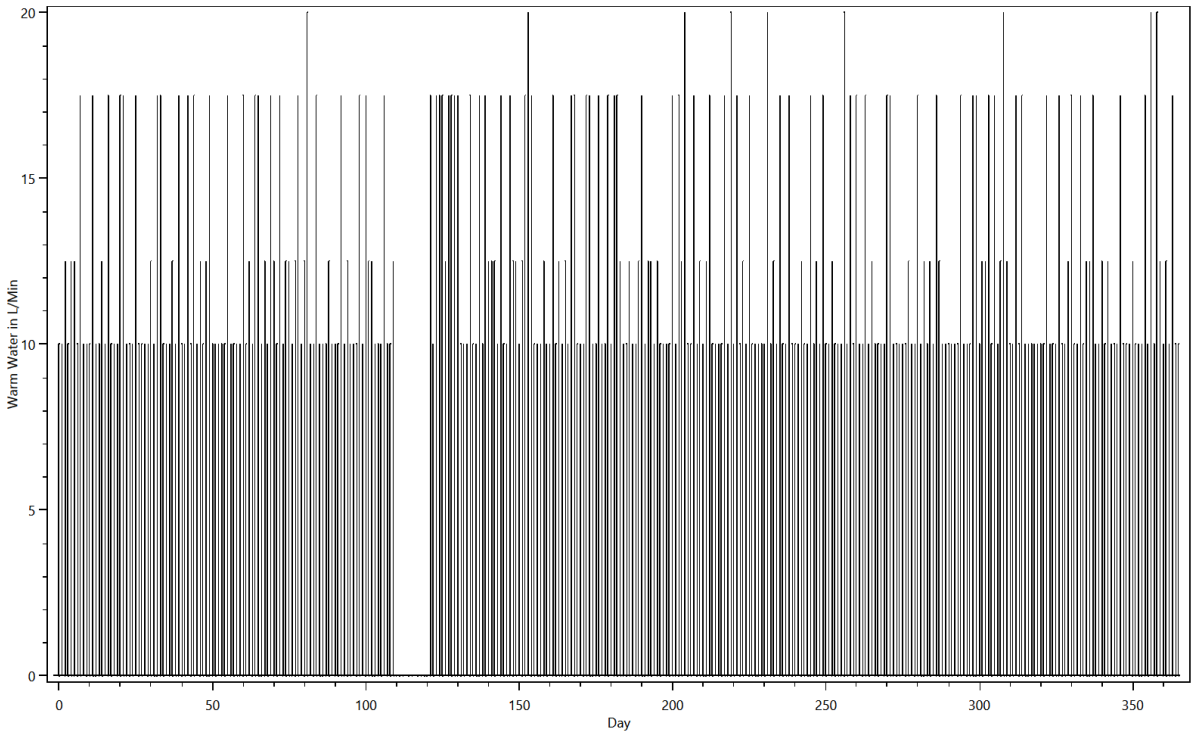
Summed up curve for ElectricityMinMax from SumProfiles.ElectricityMinMax..png



Summed up curve for Warm Water from SumProfiles.Warm Water.png



Summed up curve for Warm WaterMinMax from SumProfiles.Warm WaterMinMax..png



Time Profiles

This is made from the files starting with: Time Profiles

These files show which time profiles were used for each device and how often. The content looks like this:

TimeProfiles.HH0.CHR34 Couple under 30 years, one at work, one at home 0.txt

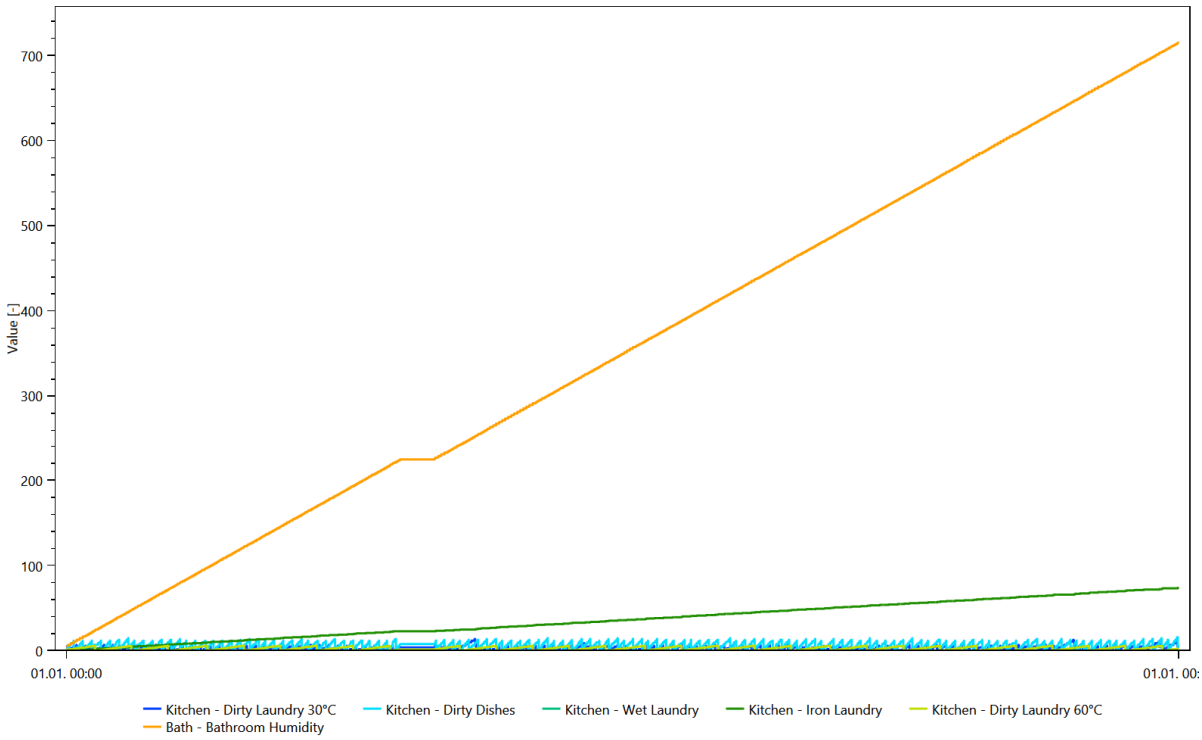
Device;Load Type;Profile;Number of Activations
Bathroom Light (100W);Electricity;Bath - light [Synthetic for Light Device];729
Bathroom Mirror Light 100W (Conventional);Electricity;Bath - light [Synthetic for Light Device];729
Bathroom Sink 10L/min;Warm Water;0 h 01 min 100% [Synthetic];2535
Bathroom Sink 10L/min;Warm Water;0 h 01 min 50% [Synthetic];396
Beamer / Acer H7531D;Electricity;02 h 0 min 100% [Synthetic];26
Beamer / Acer H7531D;Electricity;Standby PC 01 h 0 min 4% [Synthetic];8505
Bed 2;None;08 h 0 min 100% [Synthetic];355
Bed 8;None;08 h 0 min 100% [Synthetic];353
Bedroom Light (20W);Electricity;Bedroom - light [Synthetic for Light Device];170
Board Games;None;01 h 0 min 100% [Synthetic];184
Braun Multiquick 3 MR 300 Soup;Electricity;0 h 01 min 100% [Synthetic];37
CD/DVD Player / Phillips CD 380;Electricity;01 h 30 min 100% [Synthetic];285
CD/DVD Player / Phillips CD 380;Electricity;02 h 0 min 100% [Synthetic];109
CD/DVD Player / Phillips CD 380;Electricity;Standby TV / Receiver 1 h 0 min 3% [Synthetic];8519
Chair;None;0 h 10 min 100% [Synthetic];561
Cleanser;None;01 h 0 min 100% [Synthetic];104
Cloth Drying Rack;None;0 h 20 min 100% [Synthetic];148
Coffee Machine / Braun Impression KF 600;Electricity;0 h 10 min 100% [Synthetic];61
Coffee Machine / Braun KF 580E;Electricity;0 h 10 min 100% [Synthetic];581

Variables

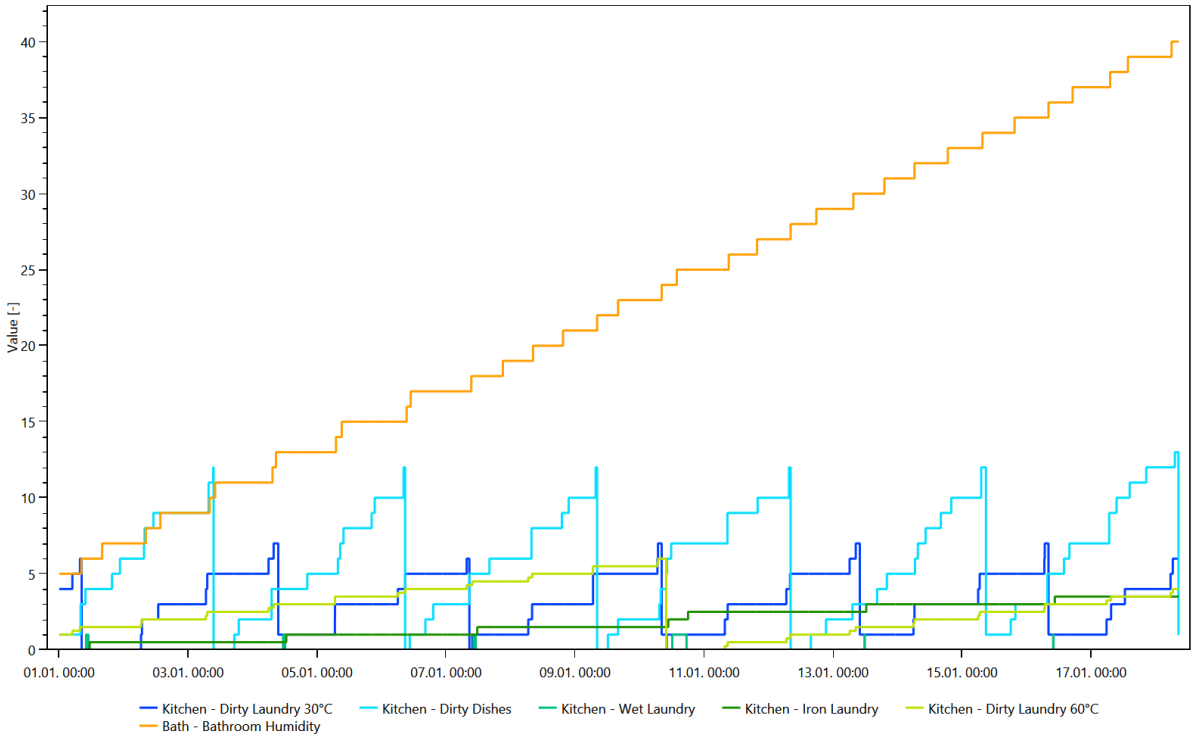
This is made from the files starting with: Variablelogfile

The variables are used to keep track of things like dirty laundry, dirty dishes and the amount of laundry to iron. They are used to ensure that for example the dishwasher is only turned on if there are sufficient dirty dishes. One chart shows the first 25000 timesteps of the contents of all variables, the other shows the entire time span.

Variables



Variables


Value [-]
40
35
30
25
20
15
10
5
0
01.01. 00:00
03.01. 00:00
05.01. 00:00
07.01. 00:00
09.01. 00:00
11.01. 00:00
13.01. 00:00
15.01. 00:00
17.01. 00:00
Kitchen - Dirty Laundry 30°C
Kitchen - Dirty Dishes
Kitchen - Wet Laundry
Kitchen - Iron Laundry
Kitchen - Dirty Laundry 60°C
Bath - Bathroom Humidity