

Overview of the results of the household CHR21 Couple, 30 - 64 years, shift worker 0

Calculation Time

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

Energy Intensity: Random

Seed 3406

LoadProfileGenerator 5.8.0.16019

by Noah Pflugradt

<http://www.loadprofilegenerator.de>

Rendering date:16.12.2016 09:17:53

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Totals

Totals for each Loadtype

Load Type	Value	Unit
Cold Water	20091.04	L
Electricity	2369.31	kWh
Warm Water	50537.10	L

Totals for each Loadtype per Day

Load Type	Value	Unit
Cold Water	54.89	L
Electricity	6.47	kWh
Warm Water	138.08	L

Minimum and Maximum for each Loadtype

Household	Minimum	Maximum	Unit
Cold Water	0.00	20.62	L/Min
Electricity	-192.36	7058.25	Watt
Warm Water	0.00	11.87	L/Min

Totals for each Loadtype per Person

Load Type	Value	Unit
Cold Water	10045.52	L
Electricity	1184.66	kWh

Warm Water	25268.55	L
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Totals for each Loadtype per Person per Day

Load Type	Value	Unit
Cold Water	27.45	L
Electricity	3.24	kWh
Warm Water	69.04	L

Persons

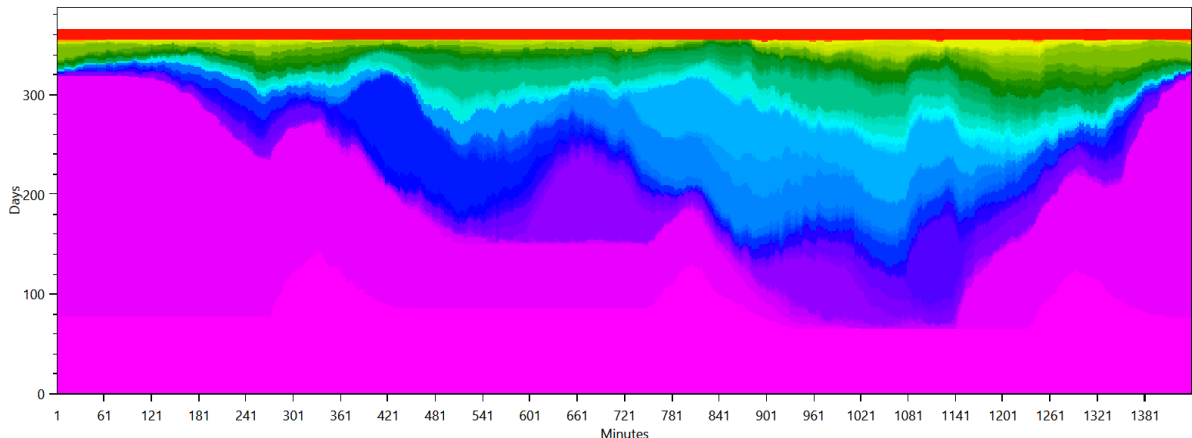
- HH0
 - CHR21 Emily (36/Female)(36/Female)
 - CHR21 John (40/Male)(40/Male)

Activity Frequency Charts

This is made from the files starting with: ActivityFrequenciesPerMinute

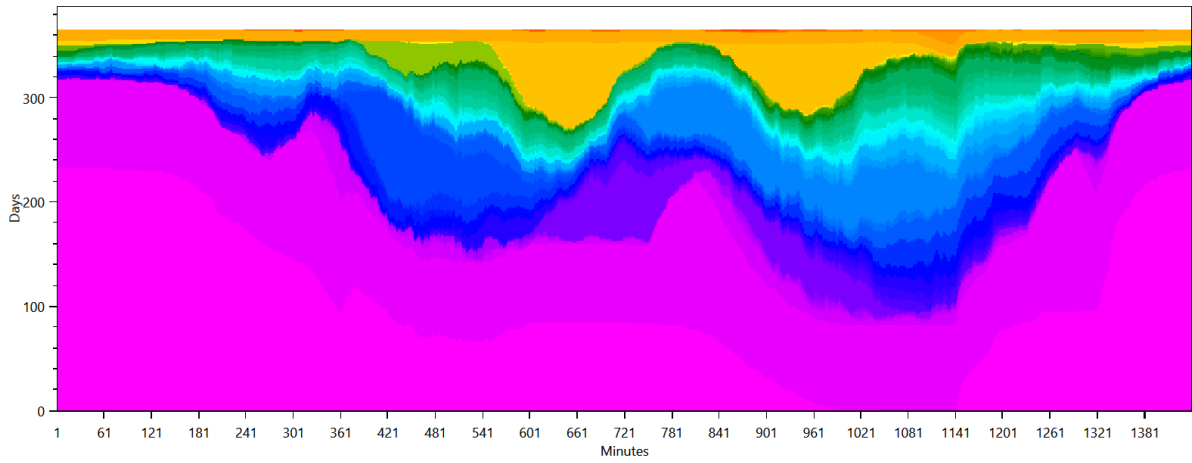
These charts show an ordered distribution of times of the activities of each person. This helps with judging quickly if a person is sleeping correctly and if they are going to work regularly.

HH0 - CHR21 Emily (36 Female)



- work as shift worker (woman) sleep bed 06 (08 h) (shift worker woman) take a shower with hair washing (women) (20 min hair drying)
- make frozen pizza and eat it go to the toilet take a nap play Playstation play digital piano (1 h) watch TV series on weekdays 18:00
- use the computer (1 h) exercise for 30 min on the treadmill fry two eggs and eat them with toast get ready in the morning (women) eat breakfast (1 h)
- play Wii run the dishwasher (triggered) bake a cake watch sports on TV with SAT Receiver (2 h) go shopping (4 h)
- take a shower without hair washing (women) take a long nap (shift worker) cook pasta and eat it play a puzzle game use the computer (1.5 h)
- watch TV with someone (watch a movie for 2 h) take a shower with hair washing (women) (5 min hair drying) watch a movie for 1 h 30 min
- use the computer with external HD (1 h) eat a cooked meal (interrupting) (eat breakfast (1 h)) go shopping for food in the supermarket (1.5 h)
- watch TV with someone (watch a movie for 1 h 30 min) listen to music on compact hifi (2 h) use the computer for recreation (2 h)
- take a shower with electric air heater make soup watch the news watch a movie for 2 h use the computer (2 h)
- watch TV with someone (watch TV (1 h)) use the laptop (1.5 h) heat up leftovers go to a bar (4 h) use the laptop for Internet, Movie, Music, News (2 h)
- cuddle and sleep (take a nap) watch TV (1 h) use the laptop (1 h) watch TV with someone (watch sports on TV with SAT Receiver (2 h))
- eat a cooked meal (interrupting) (make soup) make and drink tea (15 min) watch TV with someone (watch the news)
- eat a cooked meal (interrupting) (make frozen pizza and eat it) read a magazine read a newspaper for 30min read a book on the couch all the time
- eat a cooked meal (interrupting) (heat up leftovers) read a book on the couch only 9:00 to 22:00 take nap on the weekend (2 h)
- eat a cooked meal (interrupting) (cook pasta and eat it) taking a vacation join Wii gaming (play Wii)

HH0 - CHR21 John (40 Male)



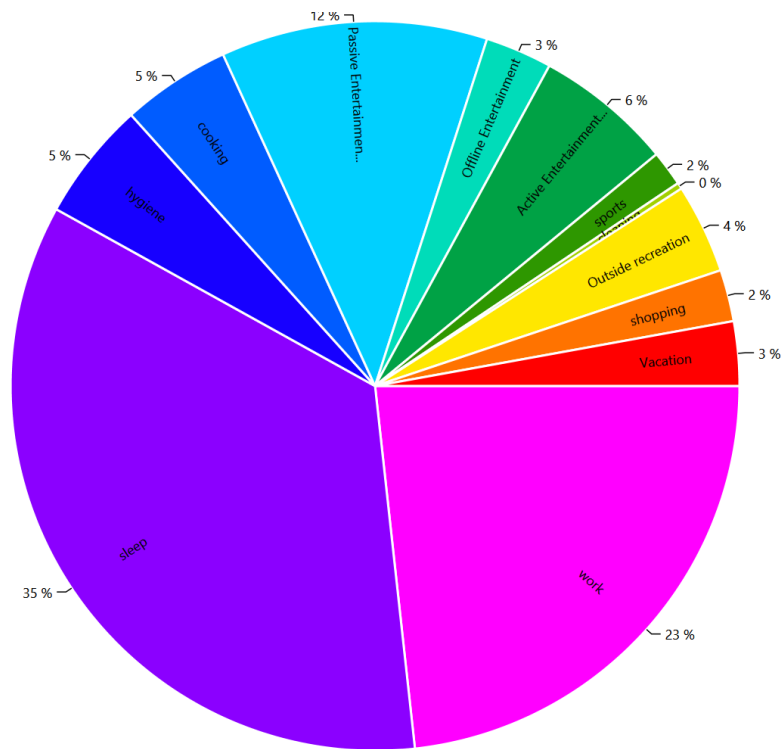
- sleep bed 07 (08 h) (shift worker man)
- work as shift worker (man)
- take a shower (men)
- go to the toilet
- do laundry at 30°C (by variable)
- make frozen pizza and eat it
- take a nap
- cuddle and sleep (take a nap)
- hang up laundry outside
- use the laptop (1.5 h)
- clean the bath
- fry two eggs and eat them with toast
- watch a movie for 2 h
- get ready in the morning (men)
- play Playstation
- eat breakfast (1 h)
- play digital piano (1 h)
- use the laptop (1 h)
- take a long nap (shift worker)
- play Wii
- use the laptop for Internet, Movie, Music, News (2 h)
- heat up leftovers
- play a puzzle game
- watch TV (1 h)
- use the computer (1 h)
- watch the news
- use the computer (1.5 h)
- watch TV with someone (watch a movie for 1 h 30 min)
- use the computer (2 h)
- watch a movie for 1 h 30 min
- use the computer for recreation (2 h)
- watch sports on TV with SAT Reciever (2 h)
- eat a cooked meal (interrupting) (make soup)
- use the computer with external HD (1 h)
- listen to music on compact hifi (2 h)
- watch TV with someone (watch a movie for 2 h)
- do laundry at 60°C (by variable)
- make soup
- watch TV with someone (watch sports on TV with SAT Reciever (2 h))
- cook pasta and eat it
- joining a trip to a bar for 4h (go to a bar (4 h))
- vacuum the household
- eat a cooked meal (interrupting) (eat breakfast (1 h))
- bake a cake
- watch TV with someone (watch the news)
- eat a cooked meal (interrupting) (make frozen pizza and eat it)
- eat a cooked meal (interrupting) (cook pasta and eat it)
- join Wii gaming (play Wii)
- watch TV with someone (watch TV (1 h))
- go to a bar (4 h)
- go for walk (1 h)
- taking a vacation
- watch TV with someone (watch TV series on weekdays 18:00)
- read a book on the couch all the time
- read a book on the couch only 9:00 to 22:00
- make and drink tea (15 min)
- eat a cooked meal (interrupting) (heat up leftovers)
- read a book (1 h)
- read a newspaper for 30min
- read a magazine

Activity Distribution per Person

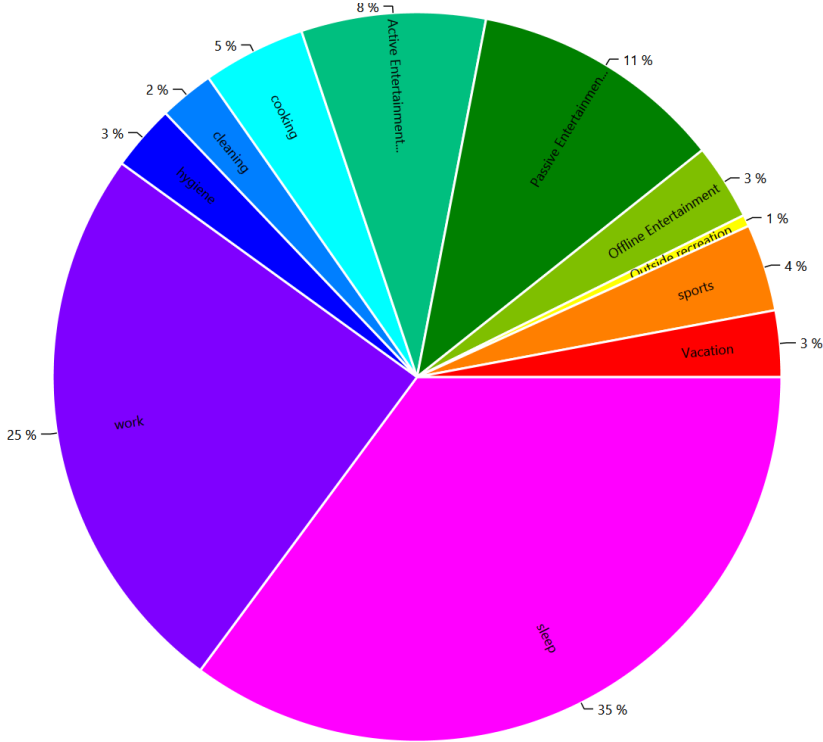
This is made from the files starting with: ActivityPercentage

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

HH0 - CHR21 Emily (36 Female)



HH0 - CHR21 John (40 Male)

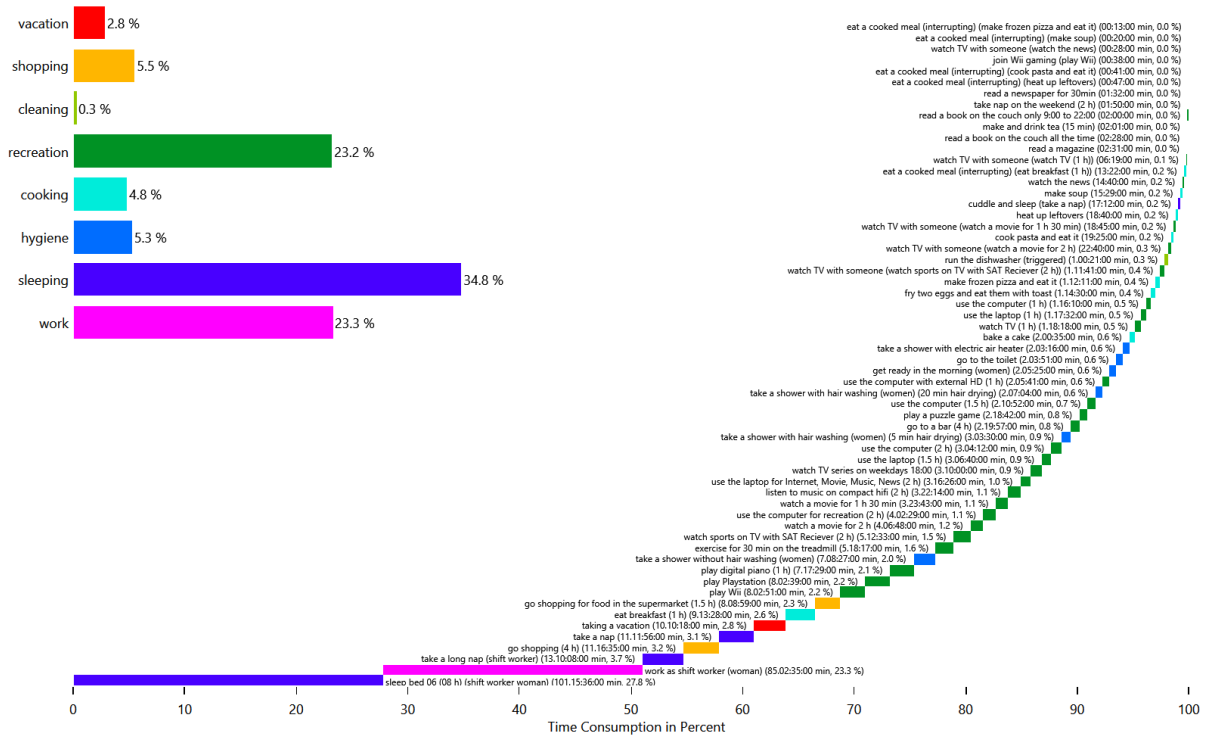


Time Use per Person per Affordance Per Person

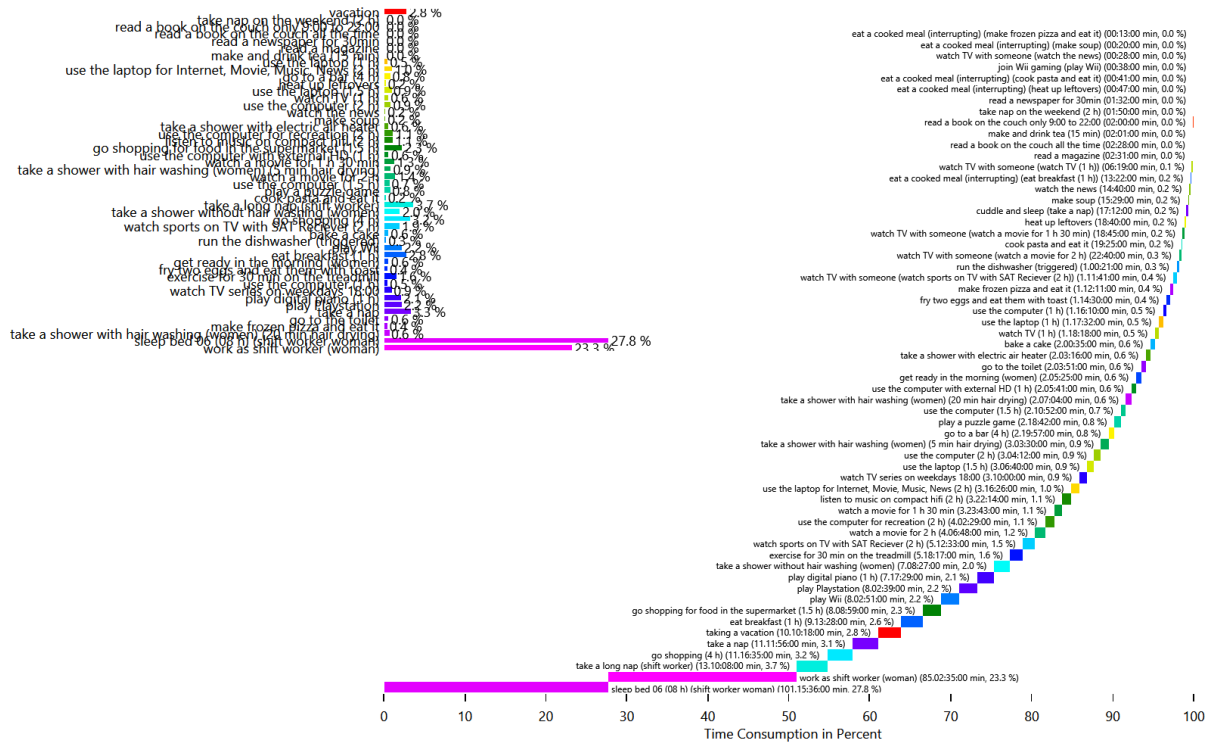
This is made from the files starting with: AffordanceTimeUse

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.

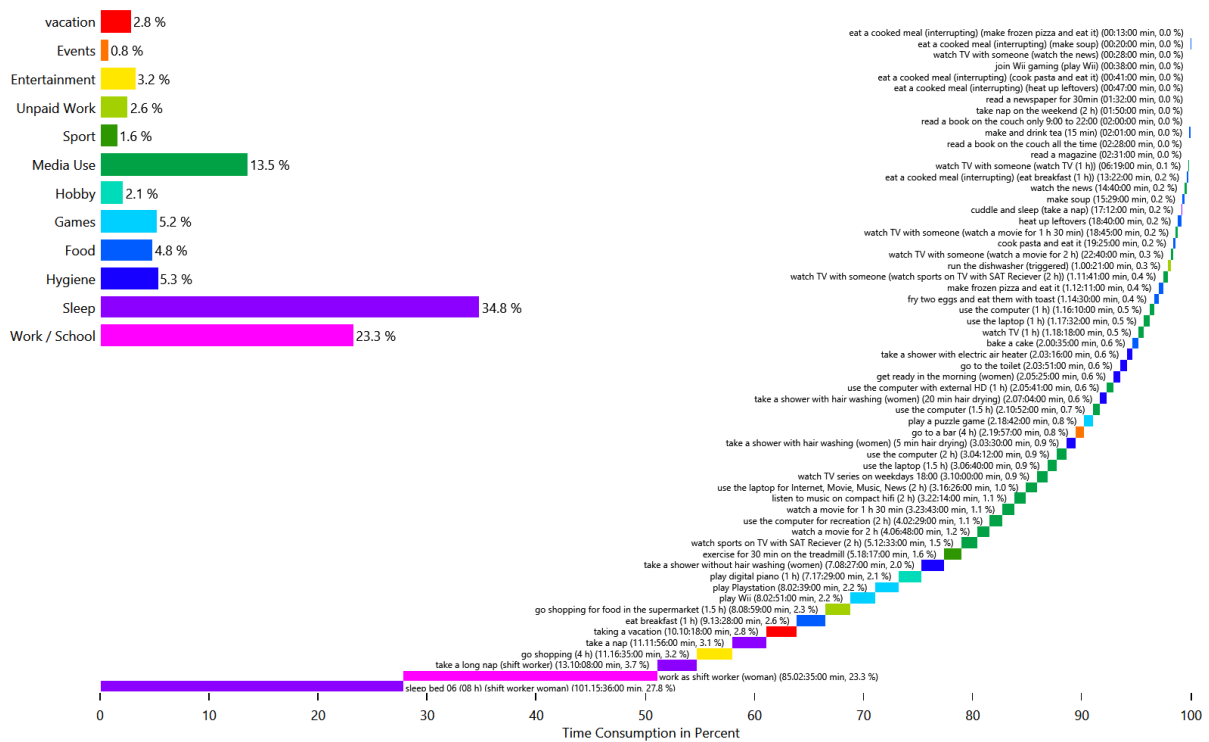
HH0 - CHR21 Emily (36 Female)



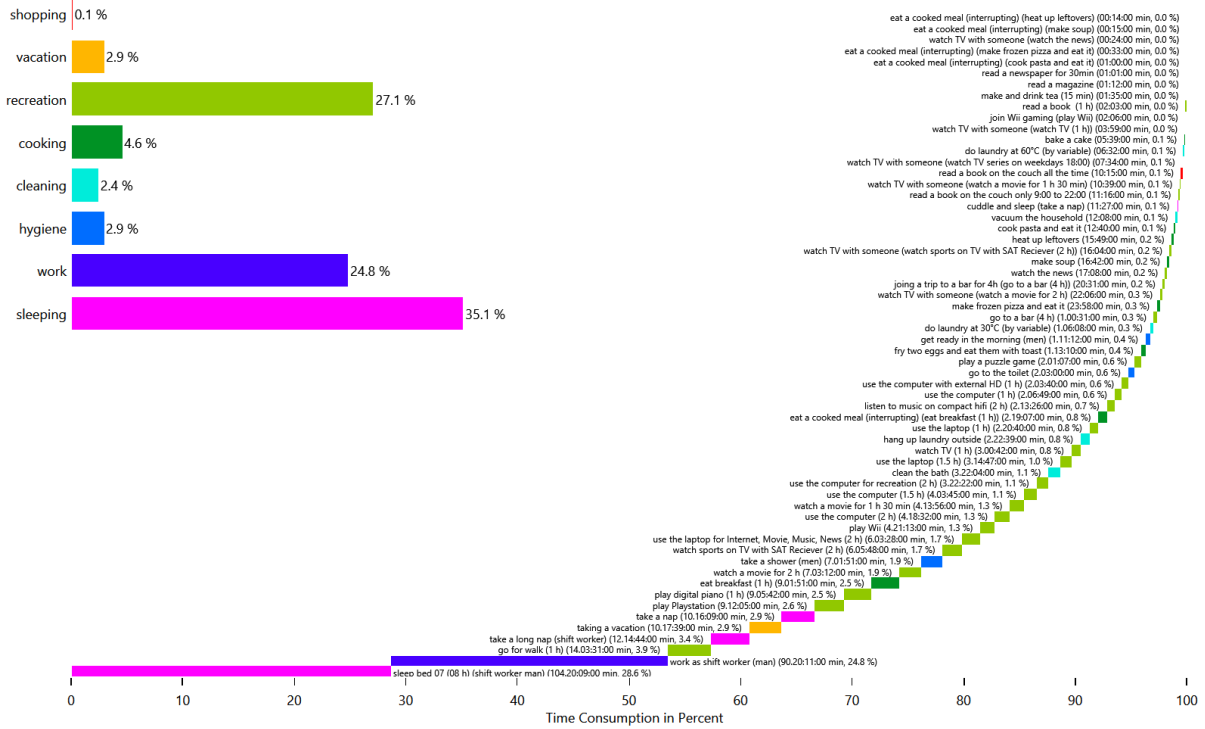
HH0 - CHR21 Emily (36 Female)



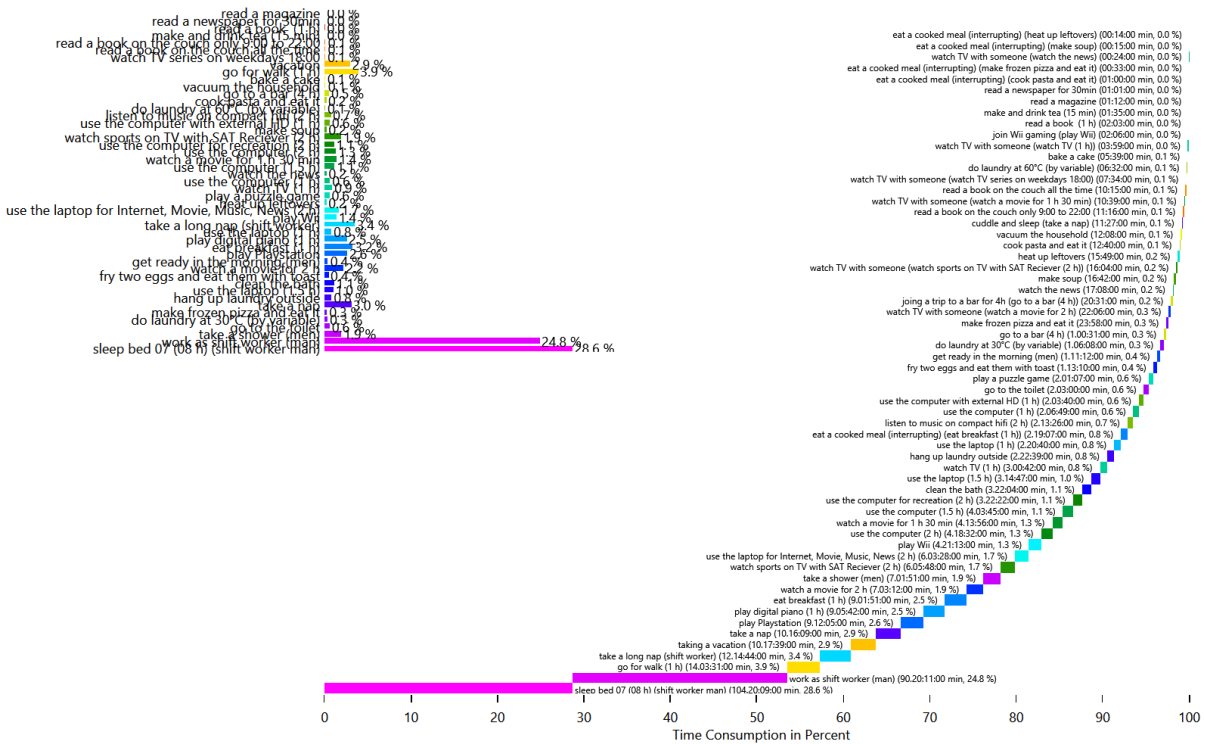
HH0 - CHR21 Emily (36 Female)



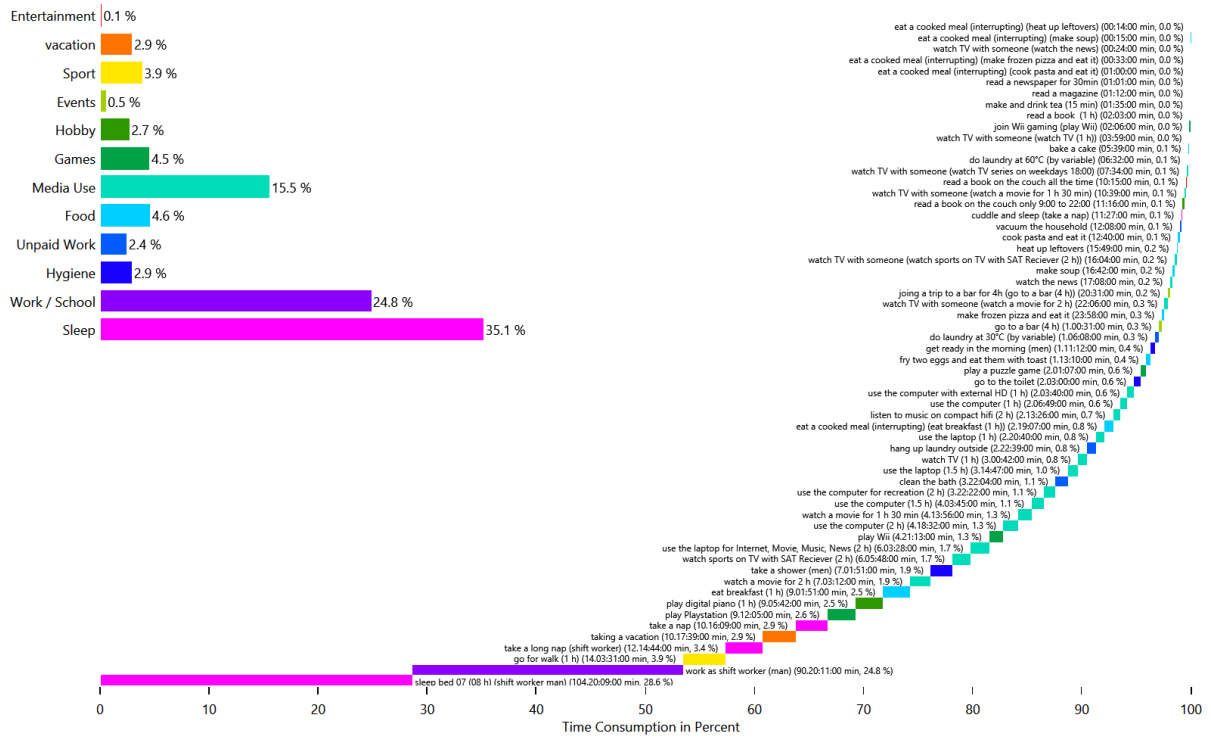
HH0 - CHR21 John (40 Male)



HH0 - CHR21 John (40 Male)



HH0 - CHR21 John (40 Male)

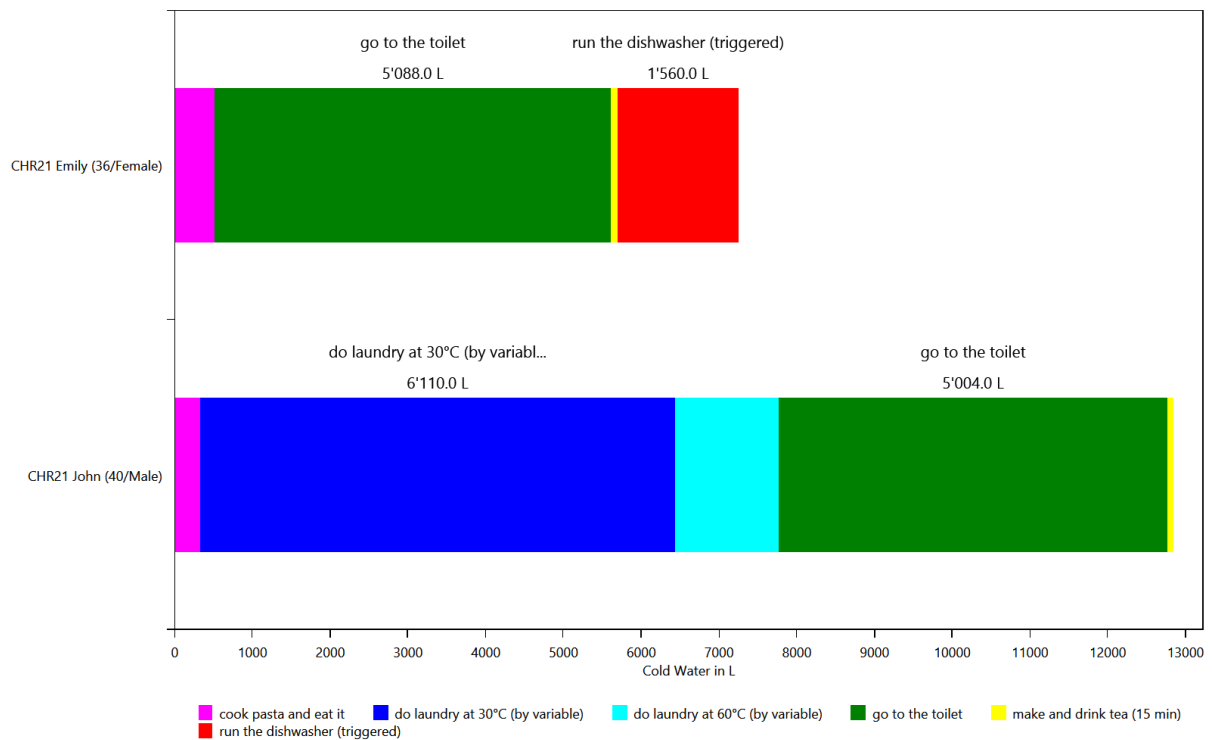


Energy use per person per affordance

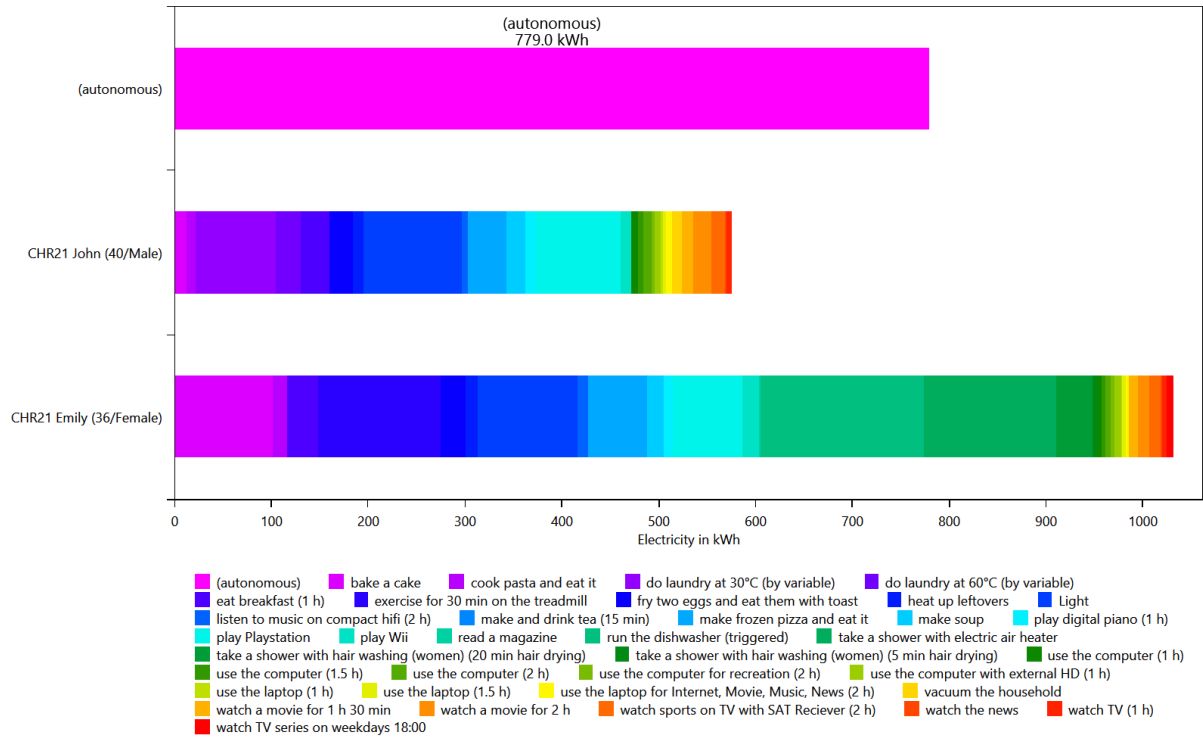
This is made from the files starting with: **AffordanceEnergyUsePerPerson**

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.

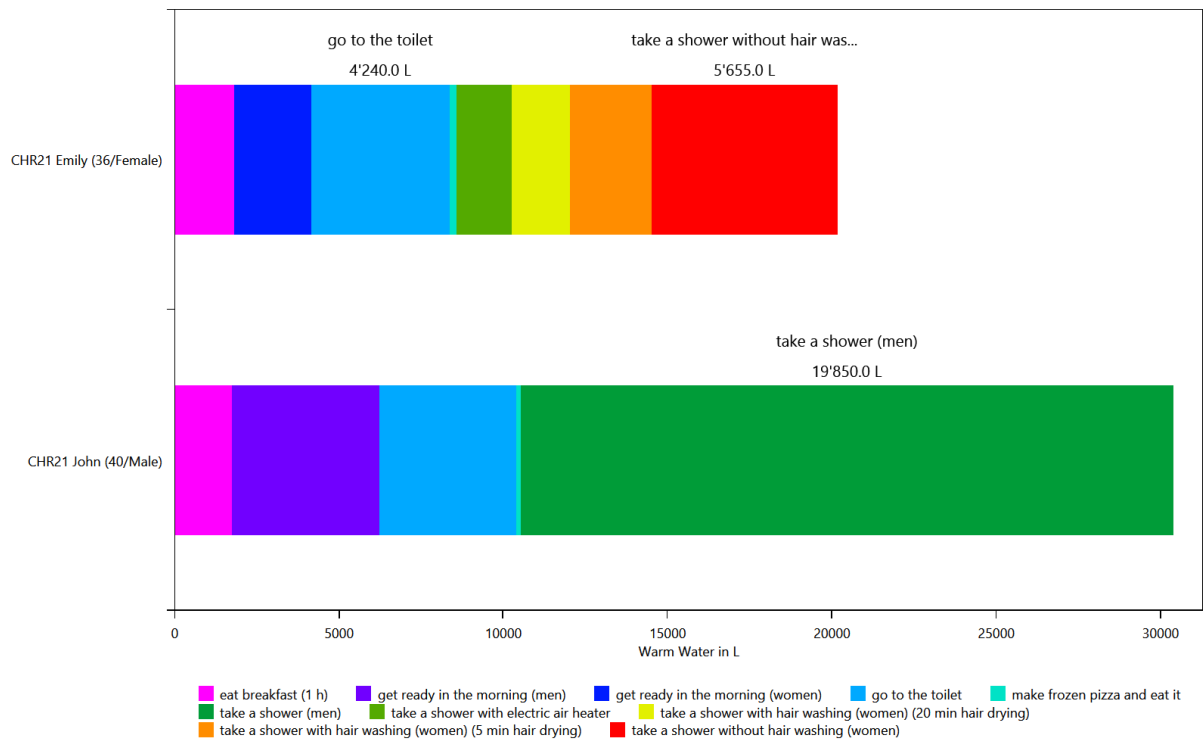
HH0 - Cold Water



HH0 - Electricity



HH0 - Warm Water

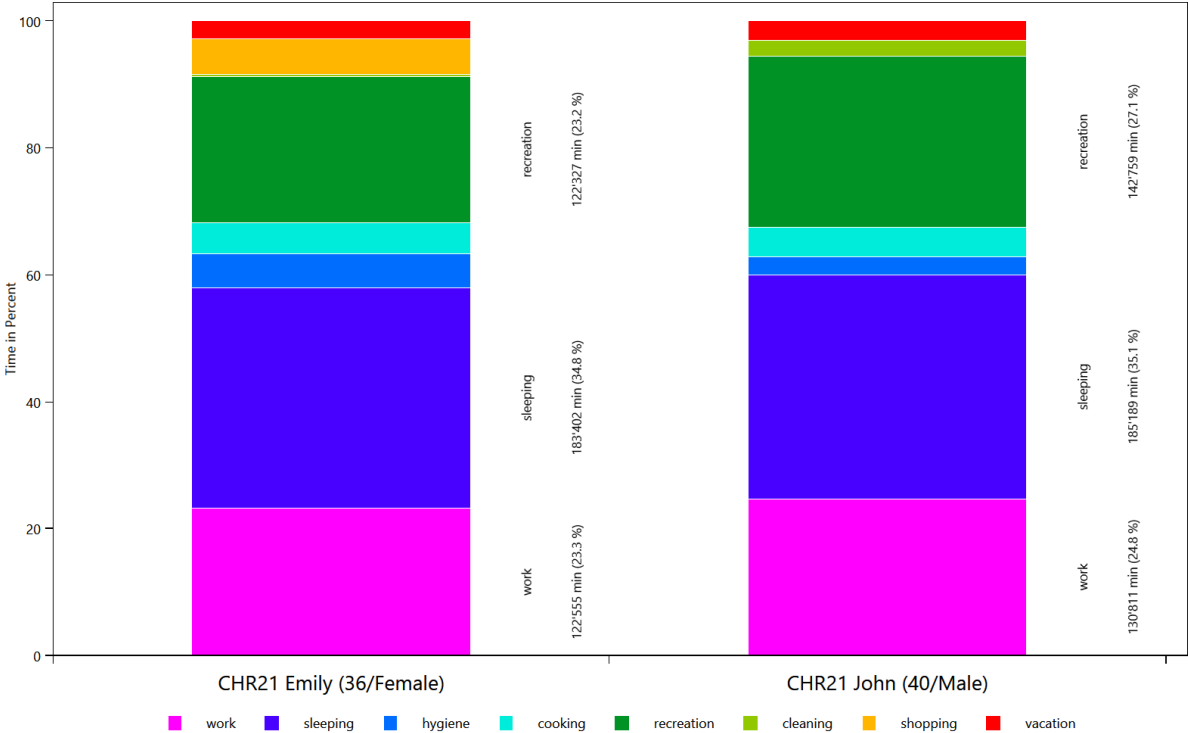


Time Use per Person Per Affordance according to different category definitions

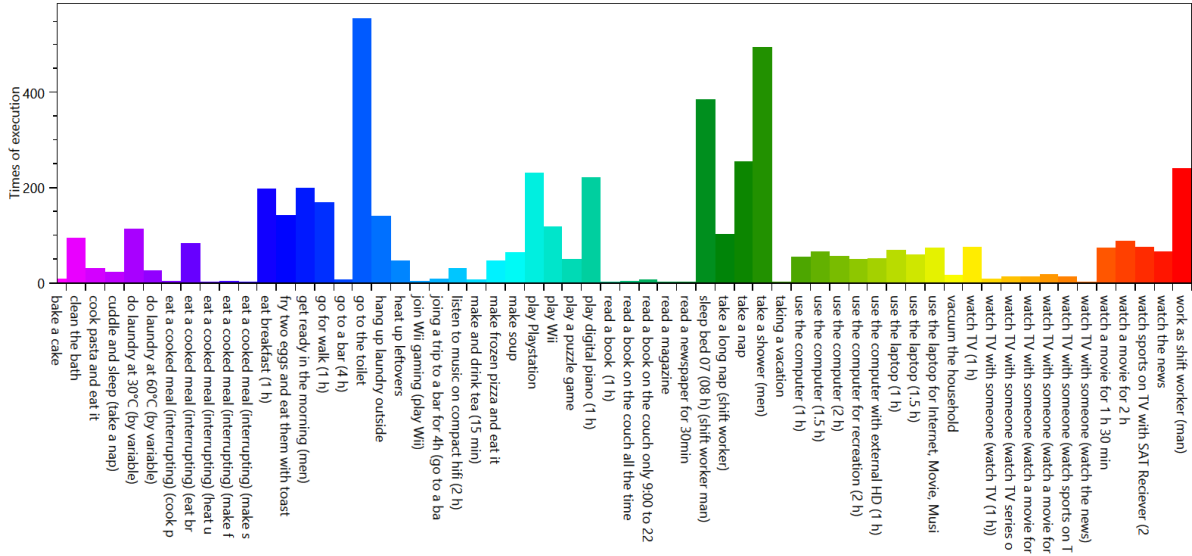
This is made from the files starting with: AffordanceTaggingSet

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



HH0 - CHR21 John (40 Male)

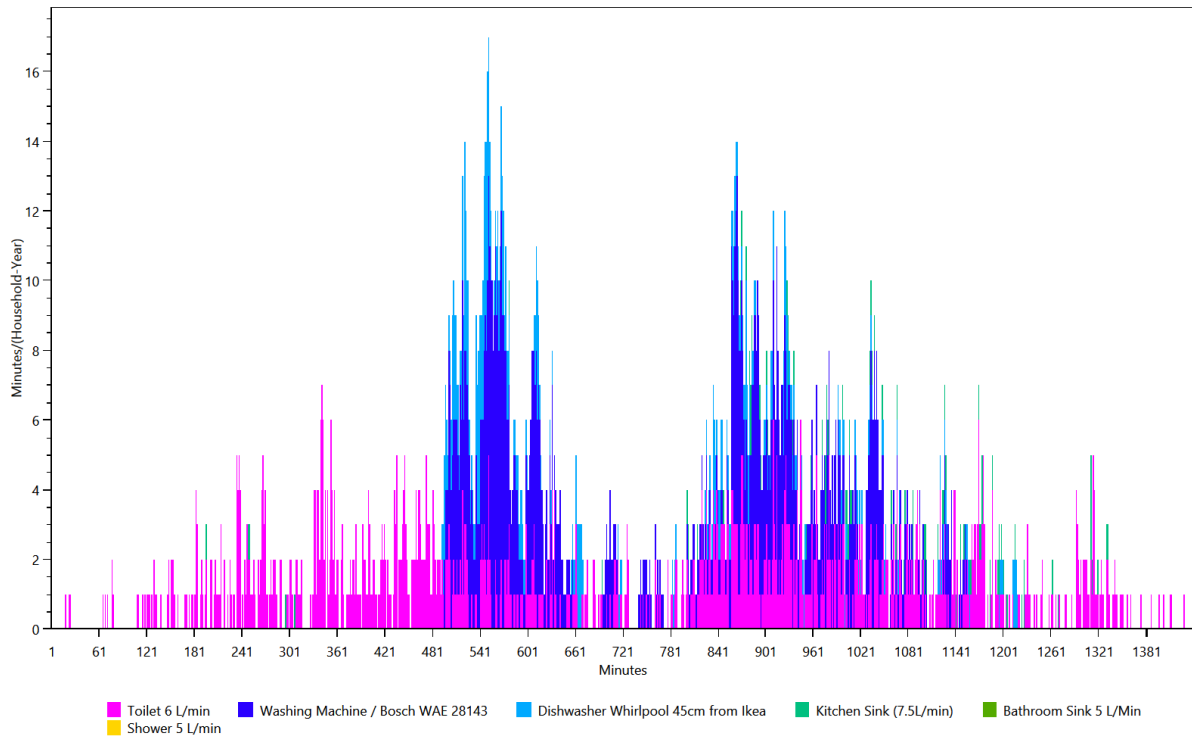


Overview of the time of the use per load type per device

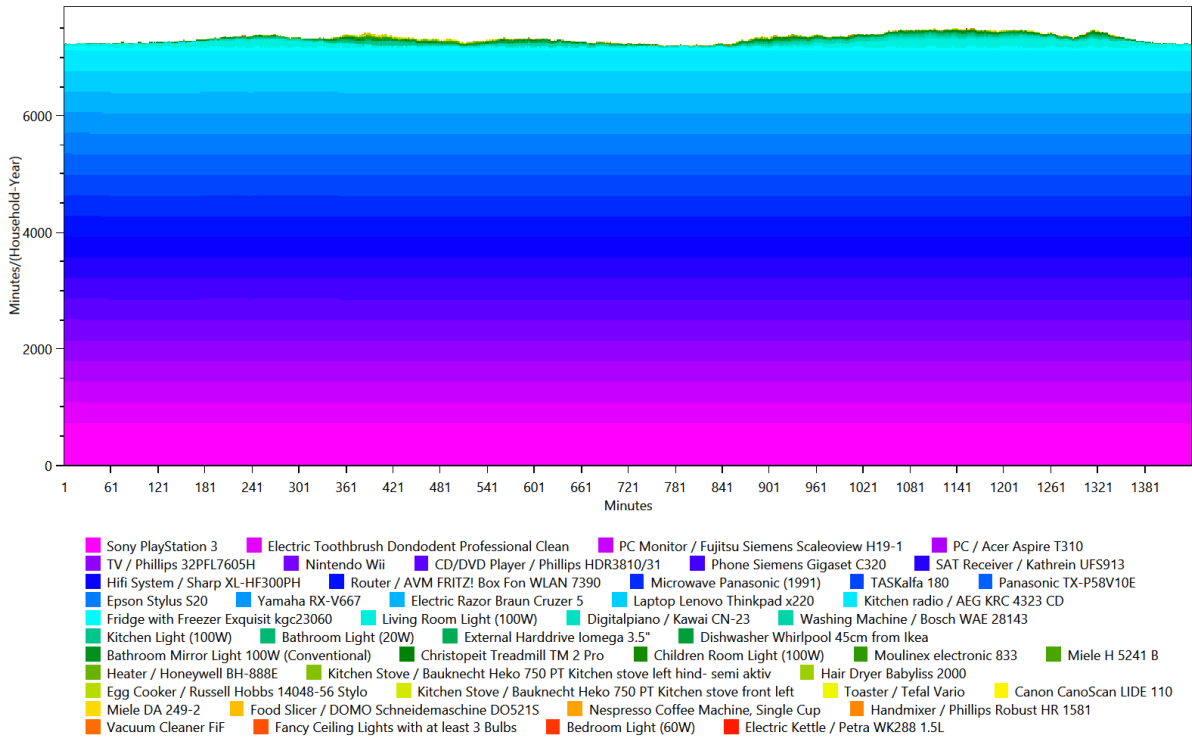
This is made from the files starting with: TimeOfUseEnergyProfiles

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

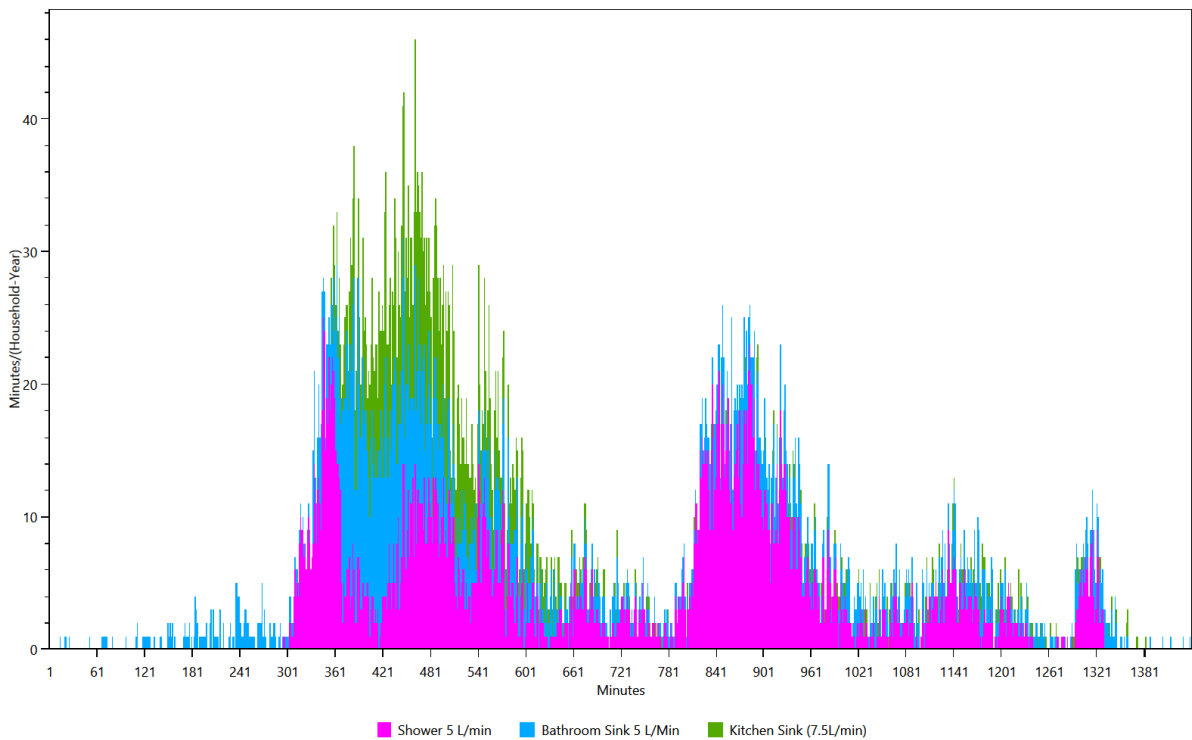
Cold Water



Electricity



Warm Water

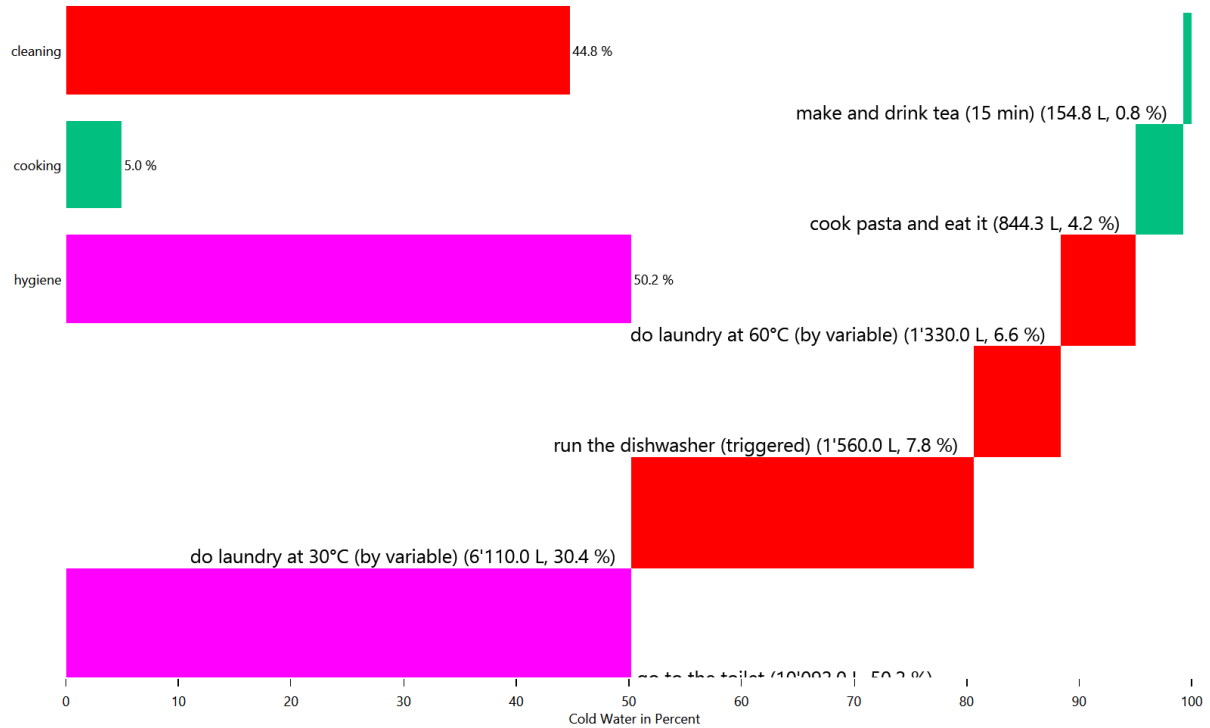


Energy/Resource use distribution per load type per affordance

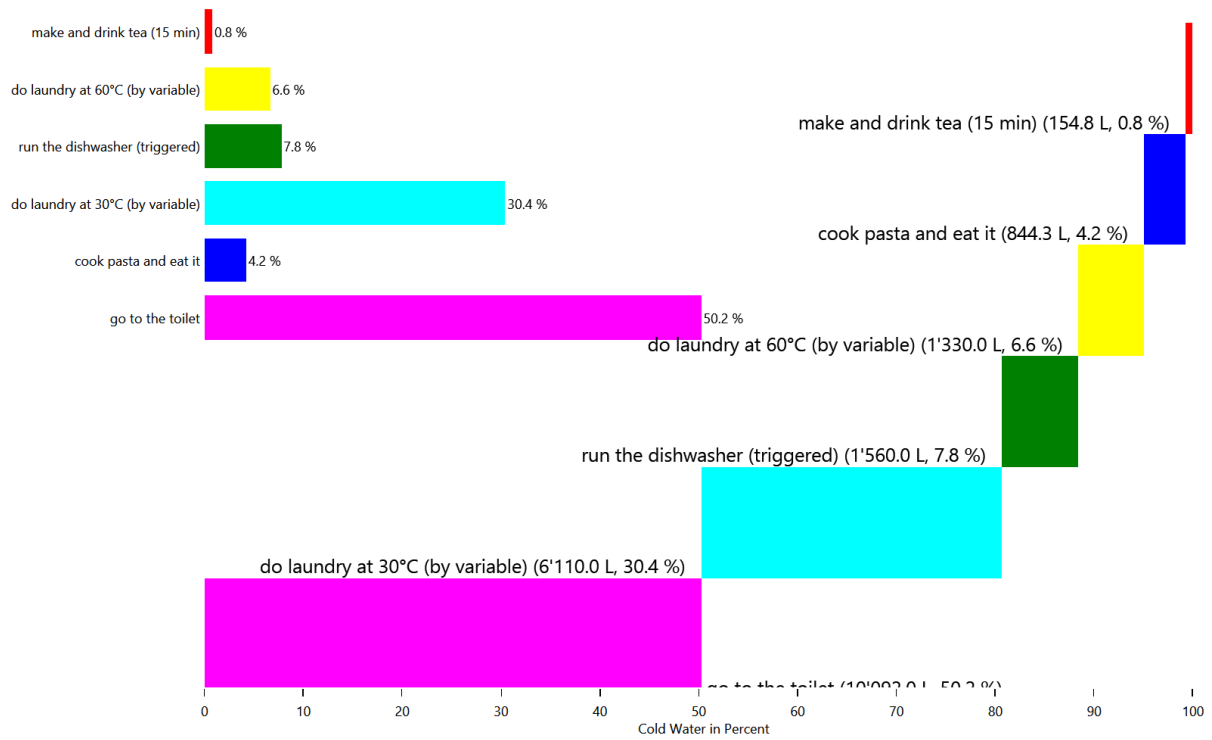
This is made from the files starting with: AffordanceEnergyUse

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

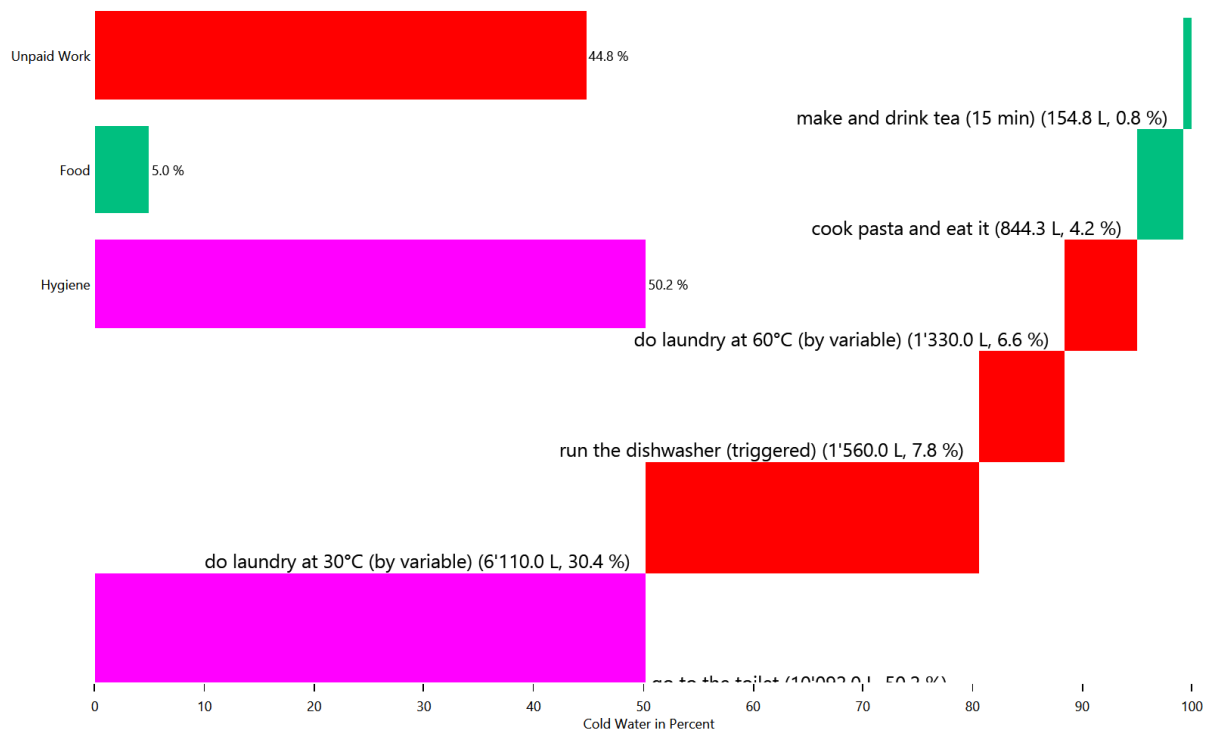
HH0 - Cold Water



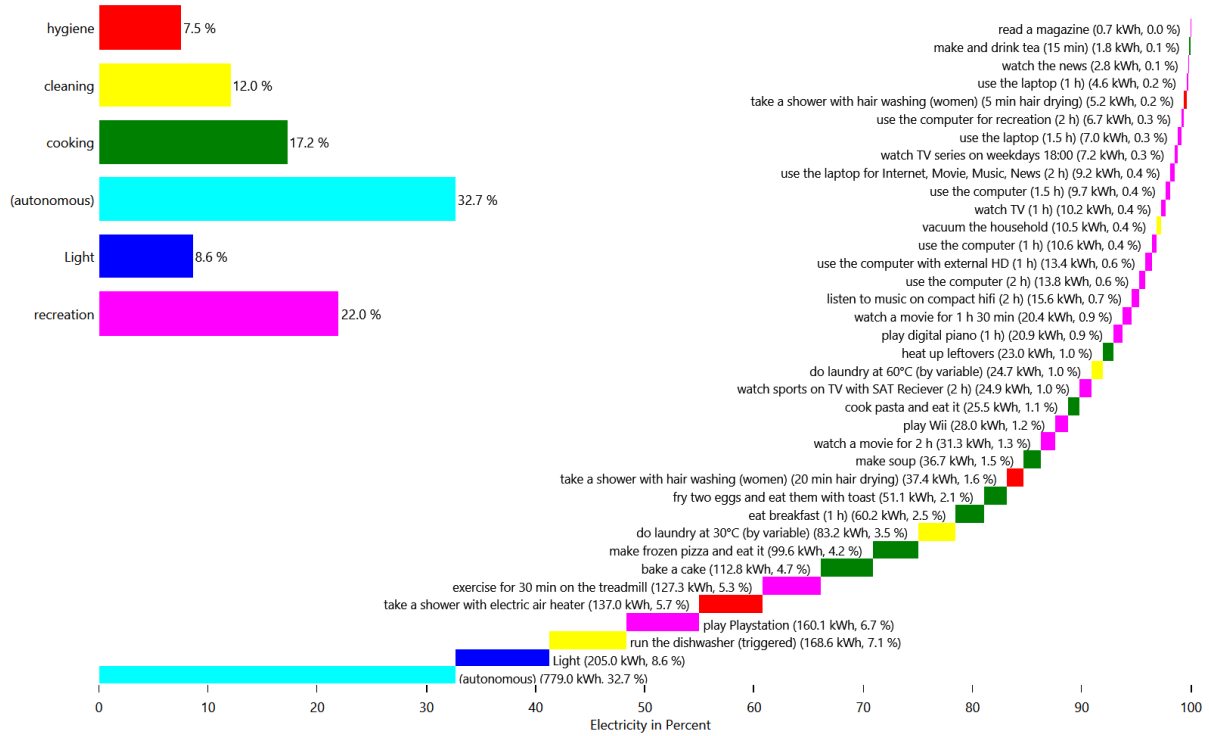
HH0 - Cold Water



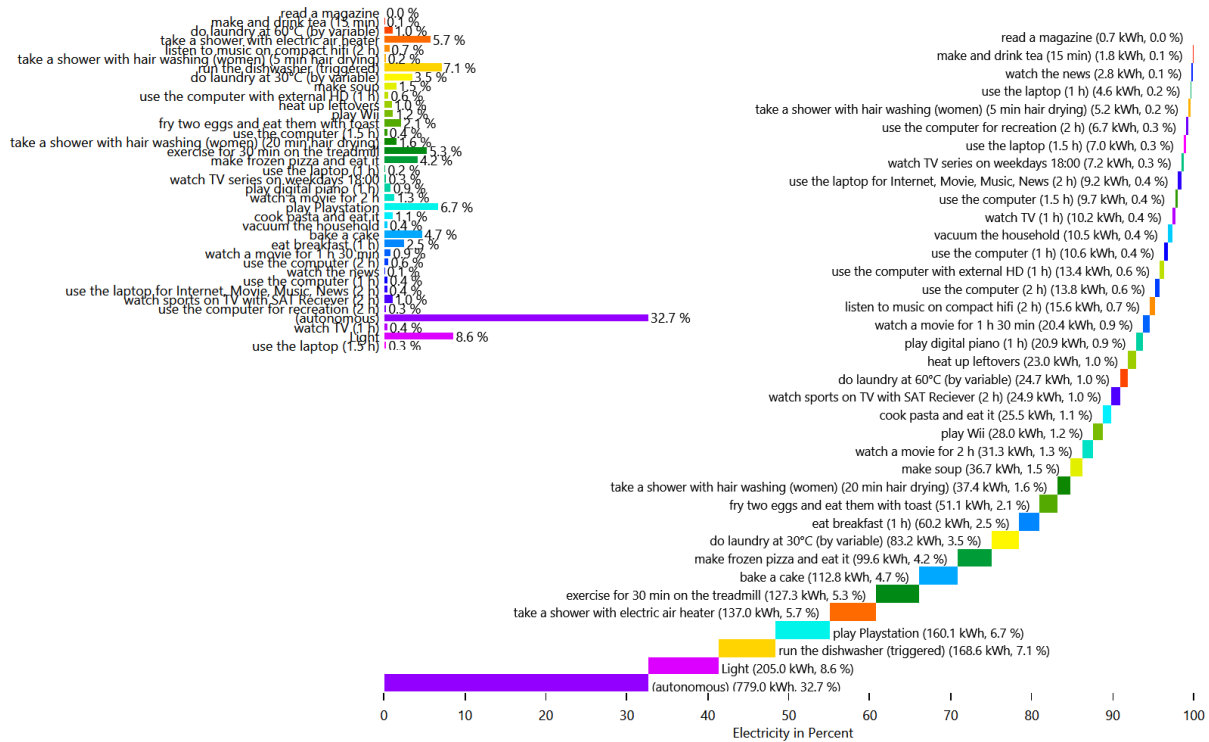
HH0 - Cold Water



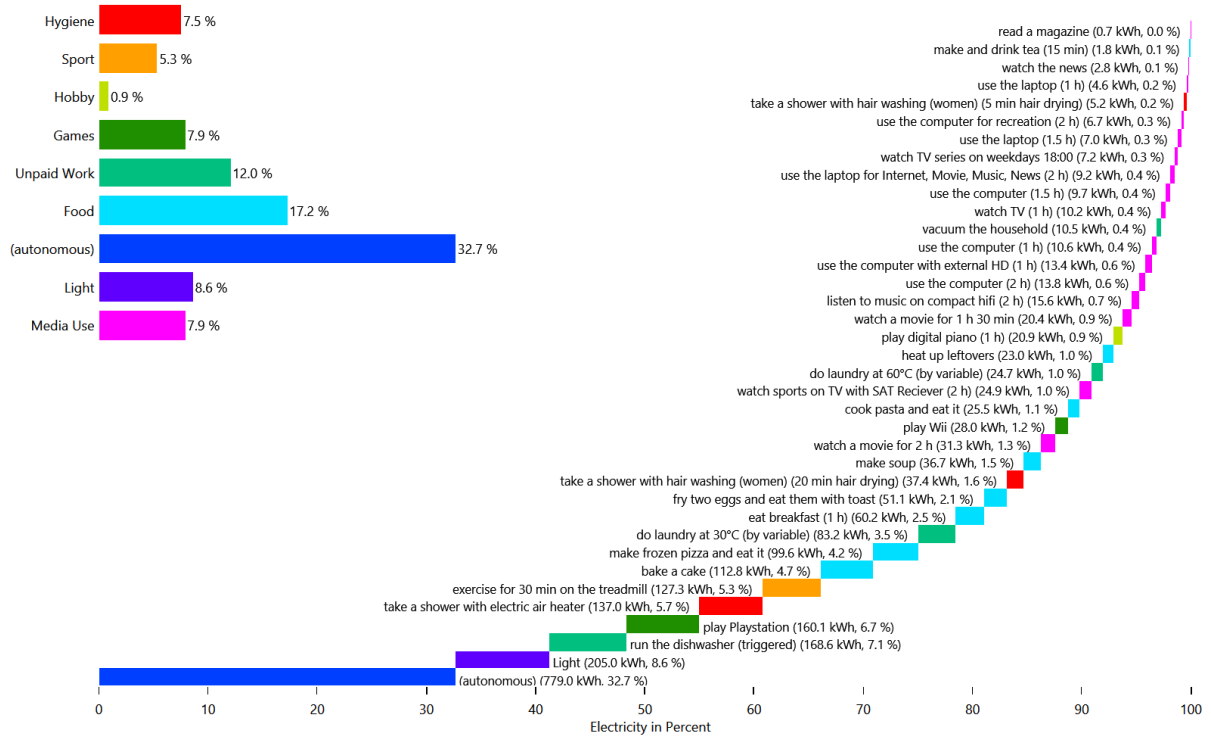
HH0 - Electricity



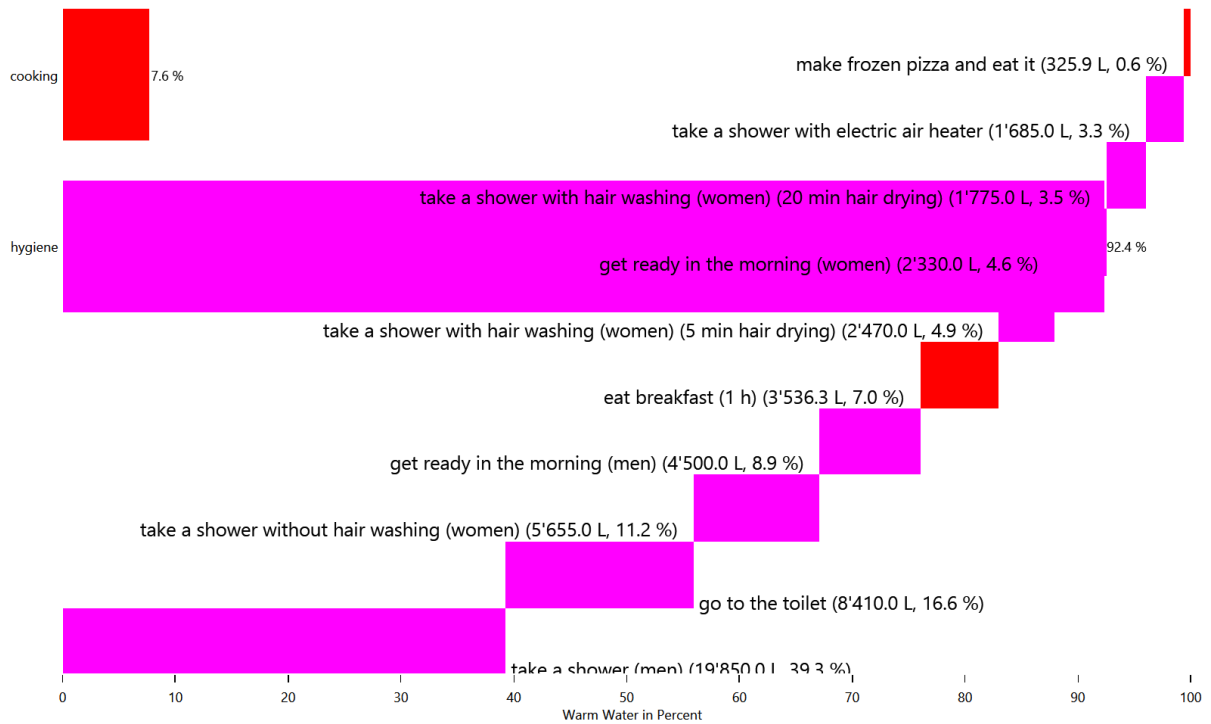
HH0 - Electricity



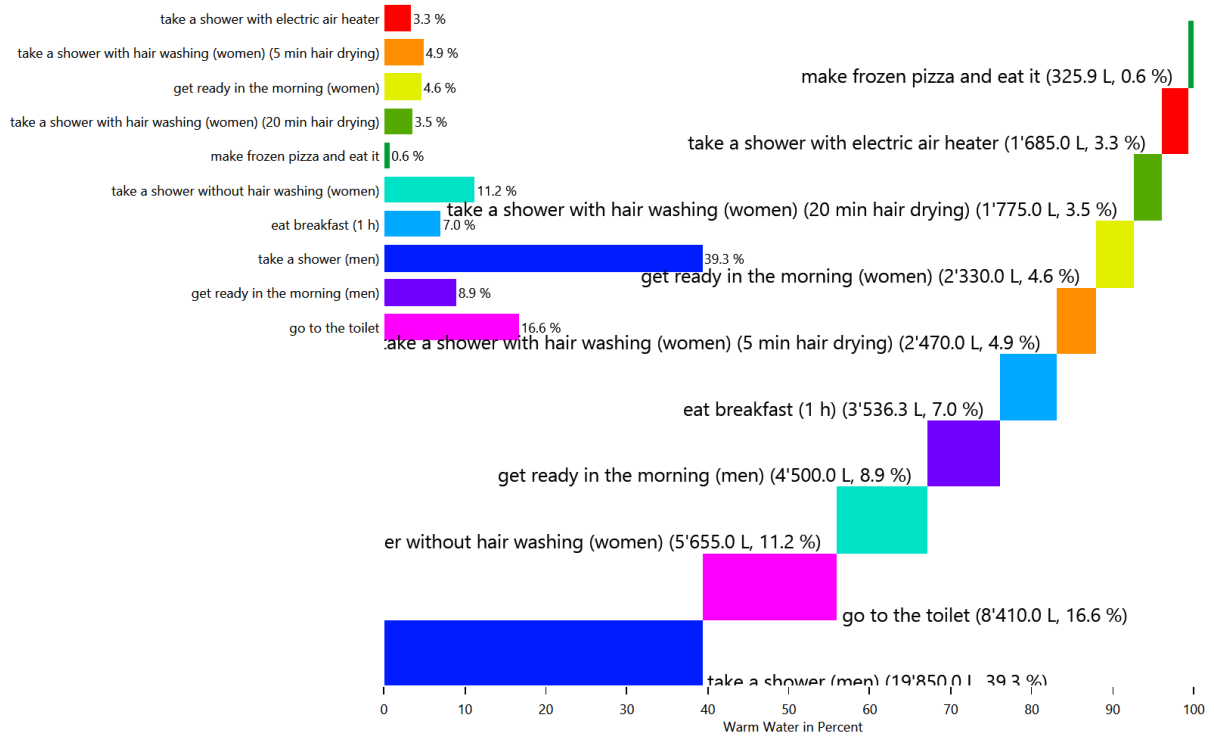
HH0 - Electricity



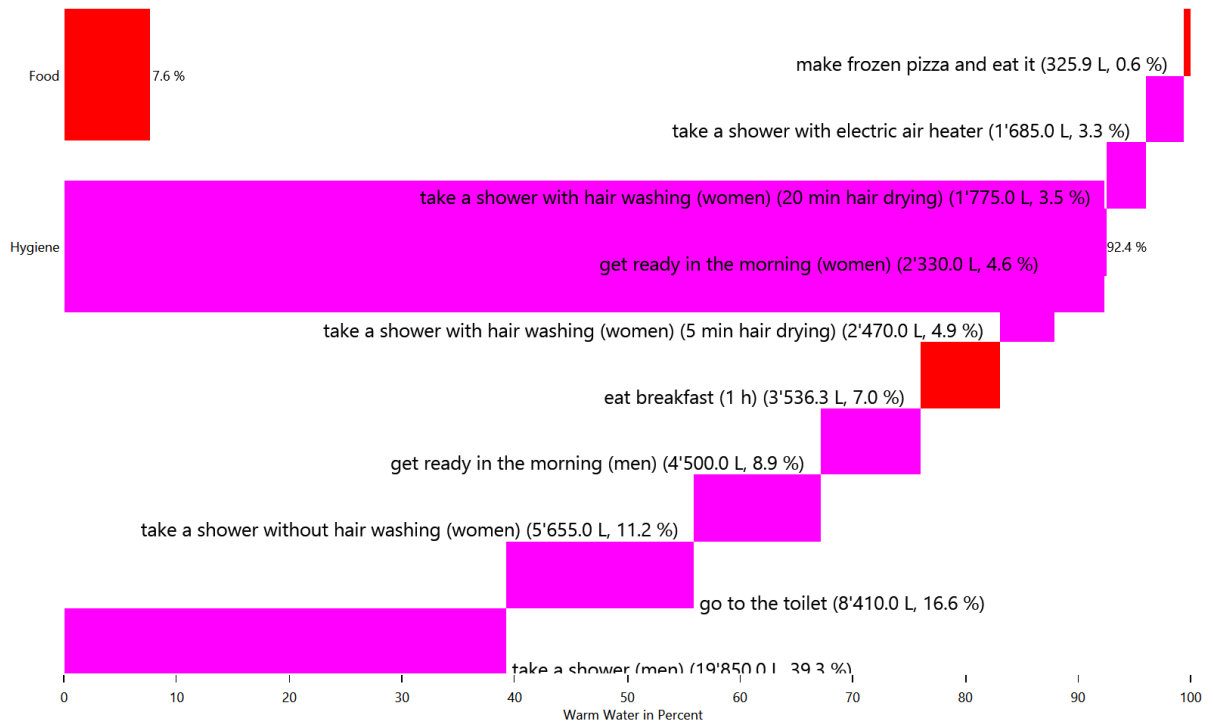
HH0 - Warm Water



HH0 - Warm Water



HH0 - Warm Water

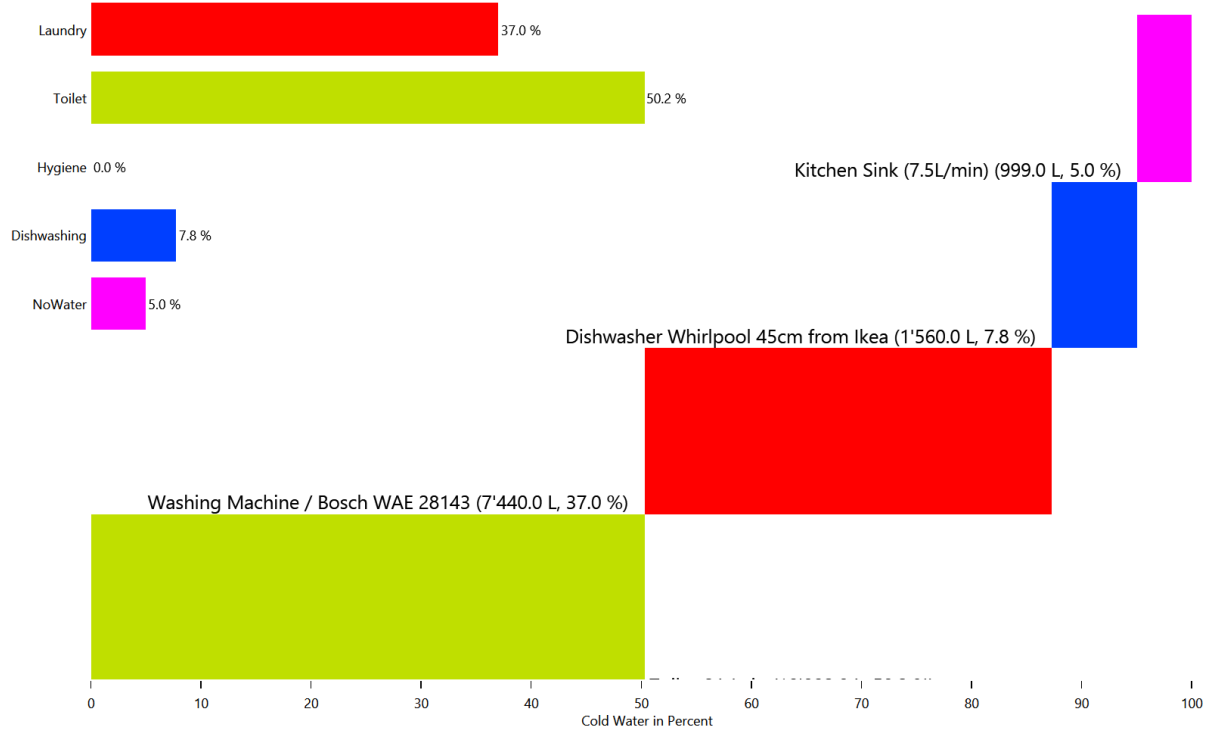


Energy use for each load type for each device

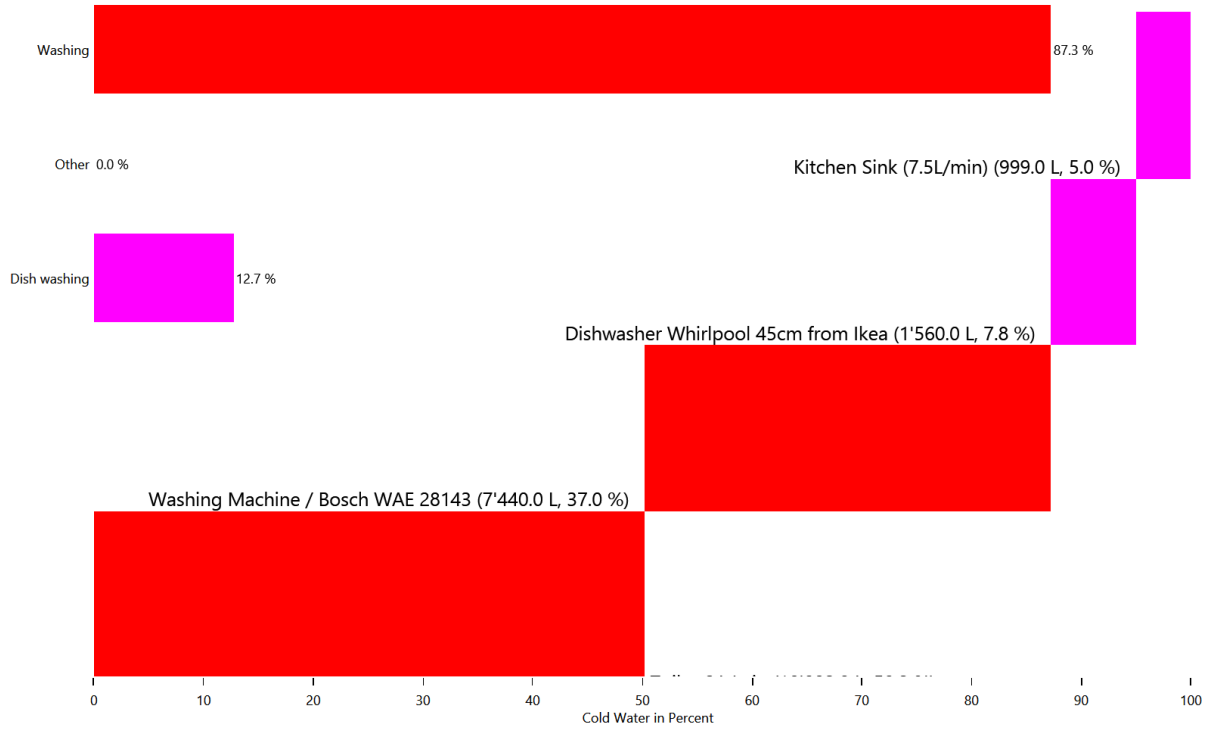
This is made from the files starting with: DeviceSums

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

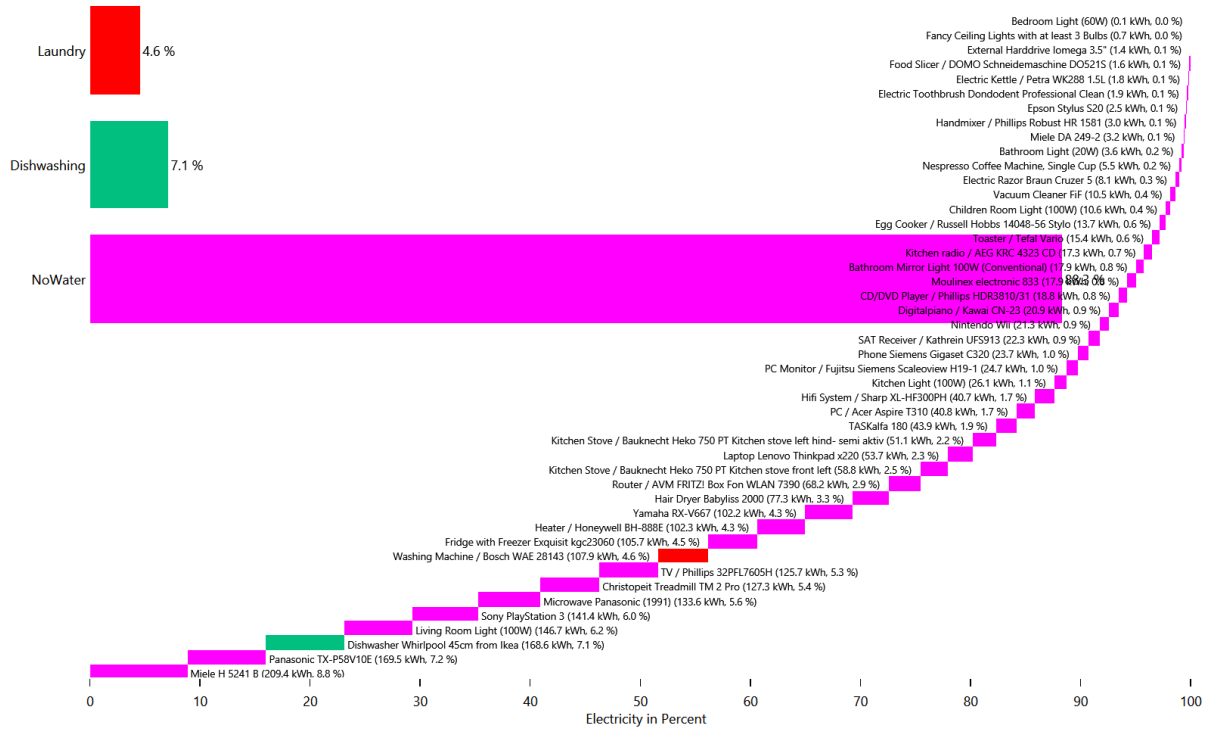
Cold Water



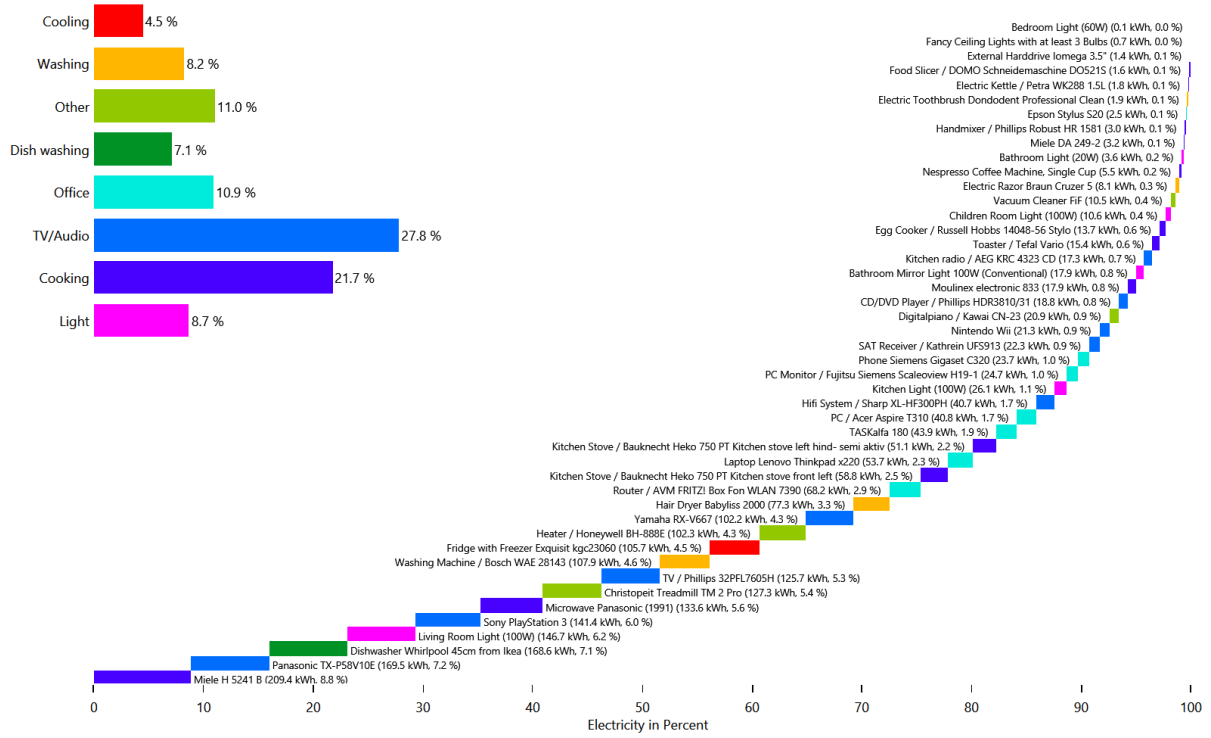
Cold Water



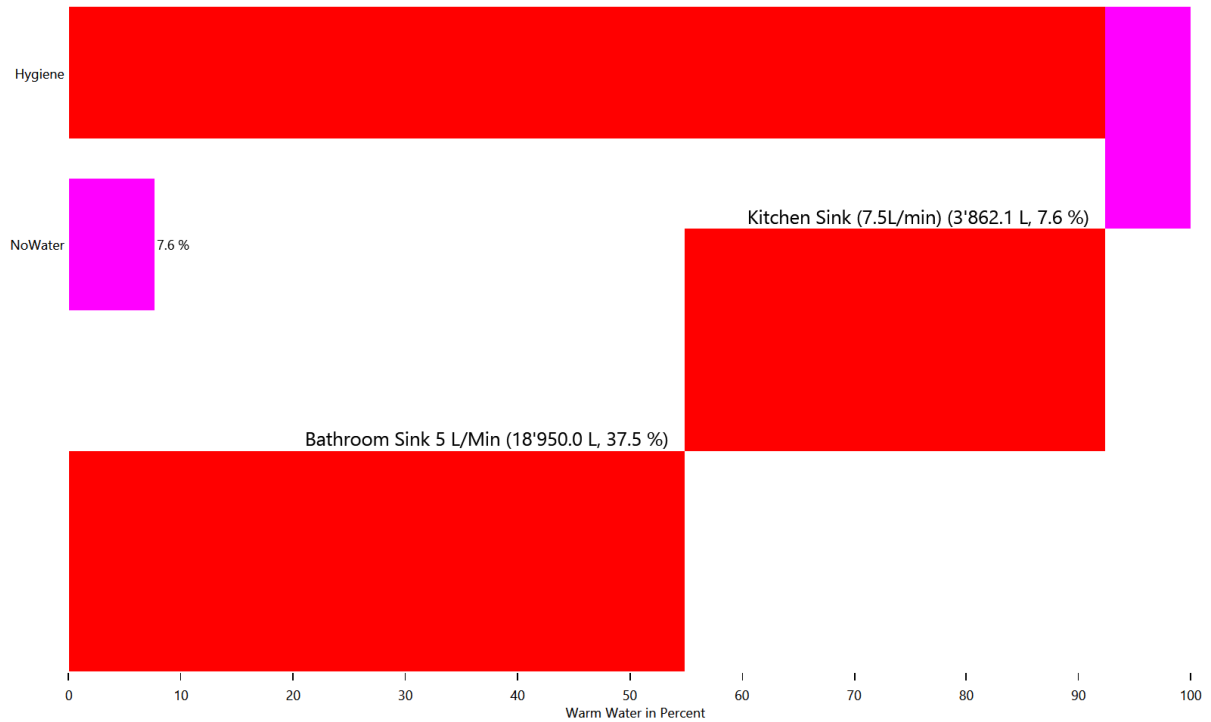
Electricity



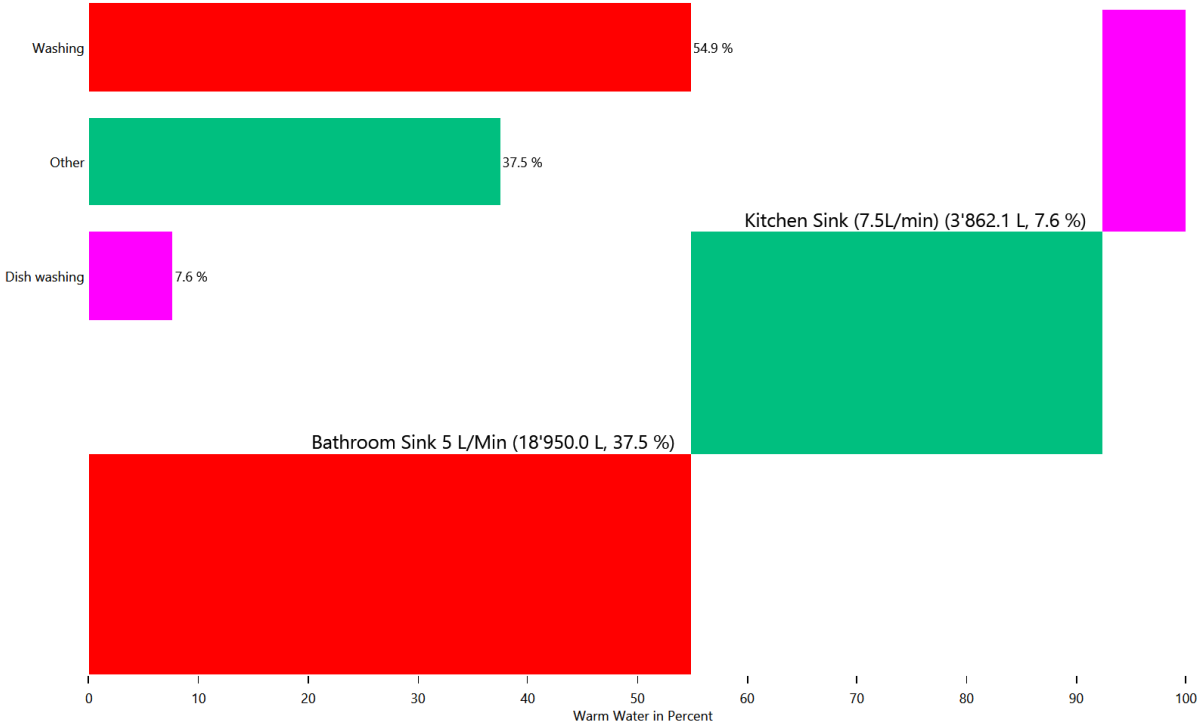
Electricity



Warm Water



Warm Water

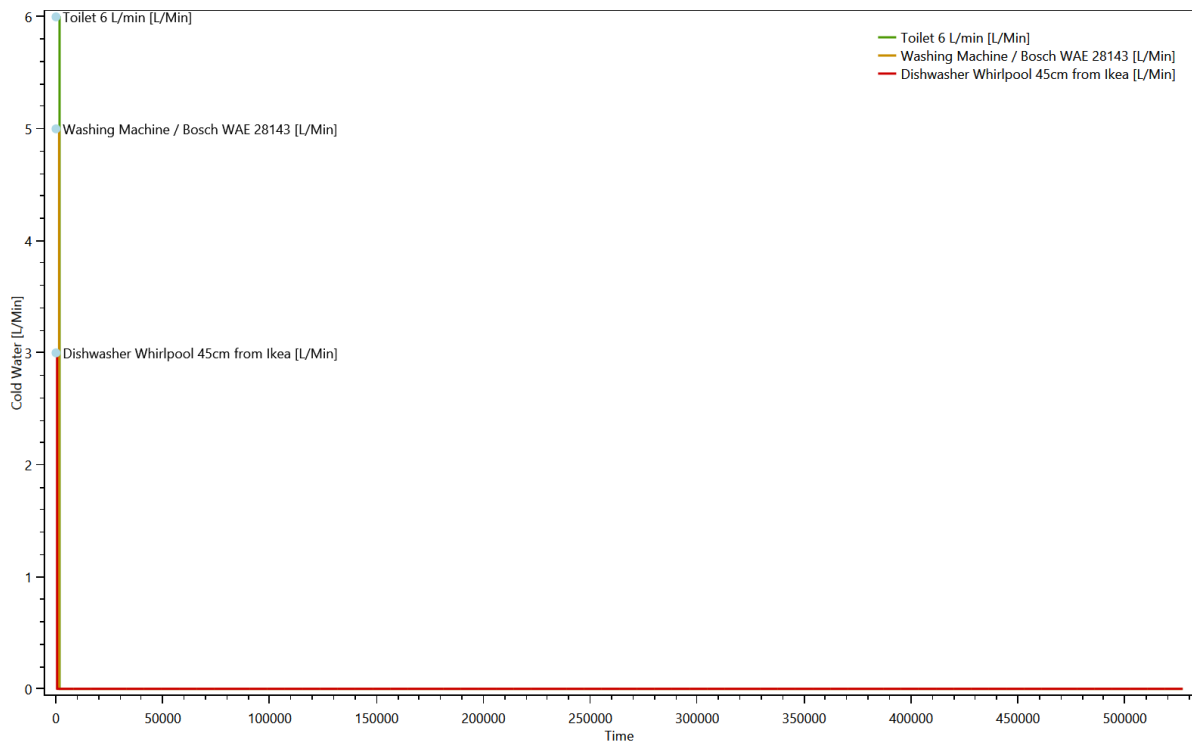


Duration curve for each device for each load type

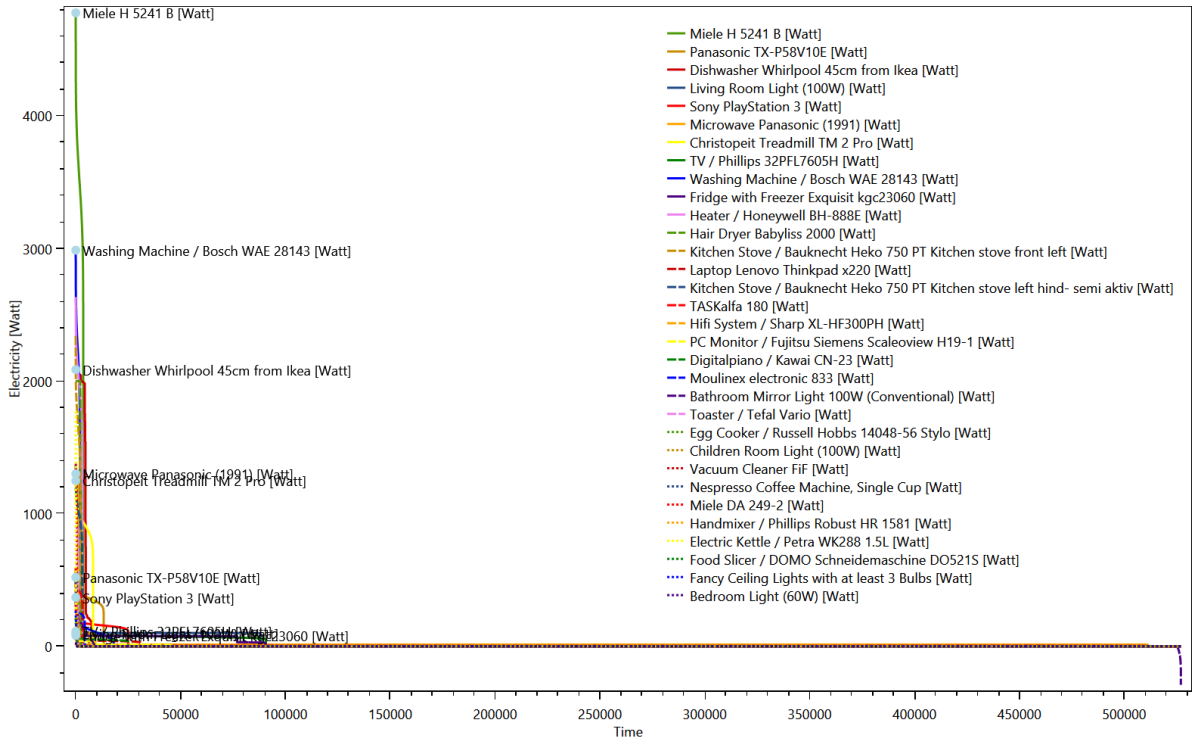
This is made from the files starting with: DeviceDurationCurves

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

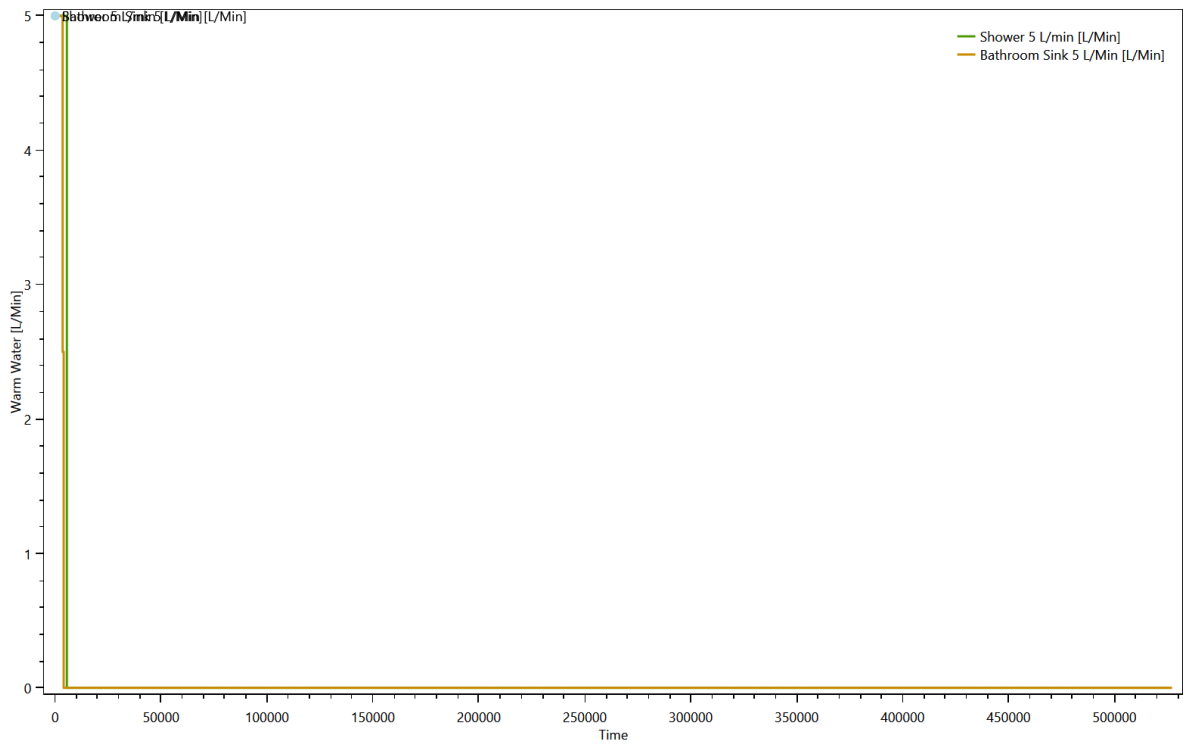
Cold Water



Electricity



Warm Water

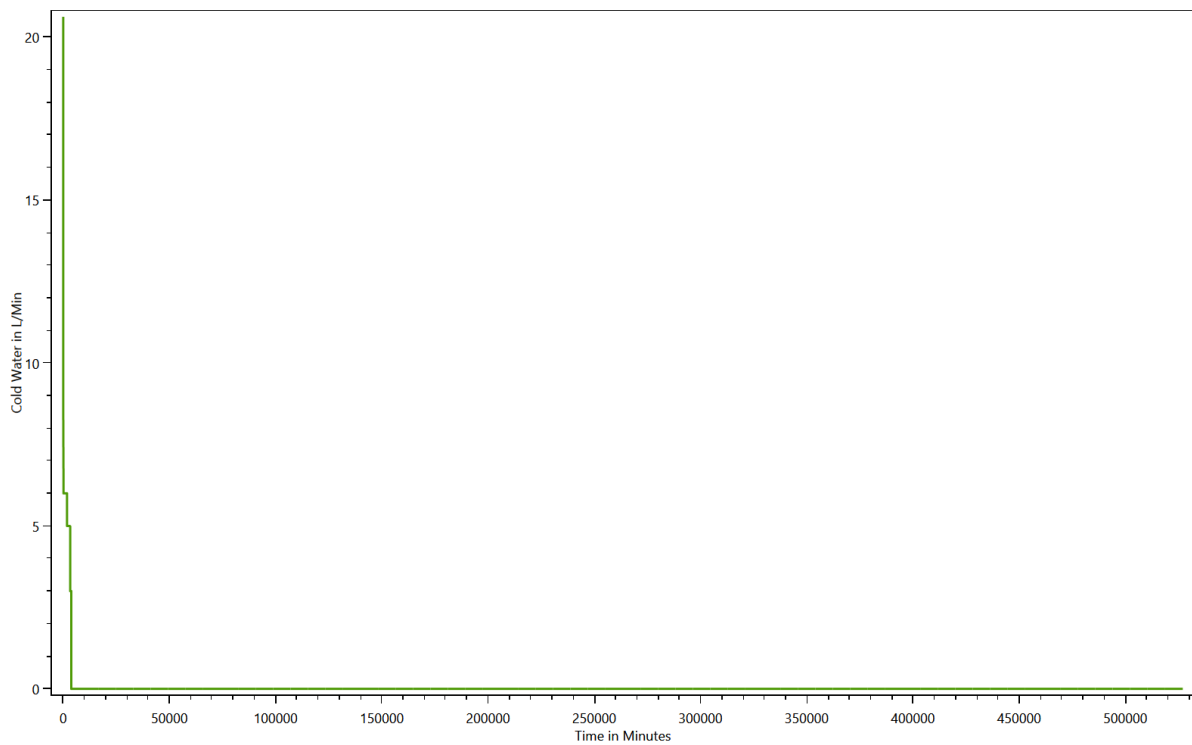


Duration curve for each load type

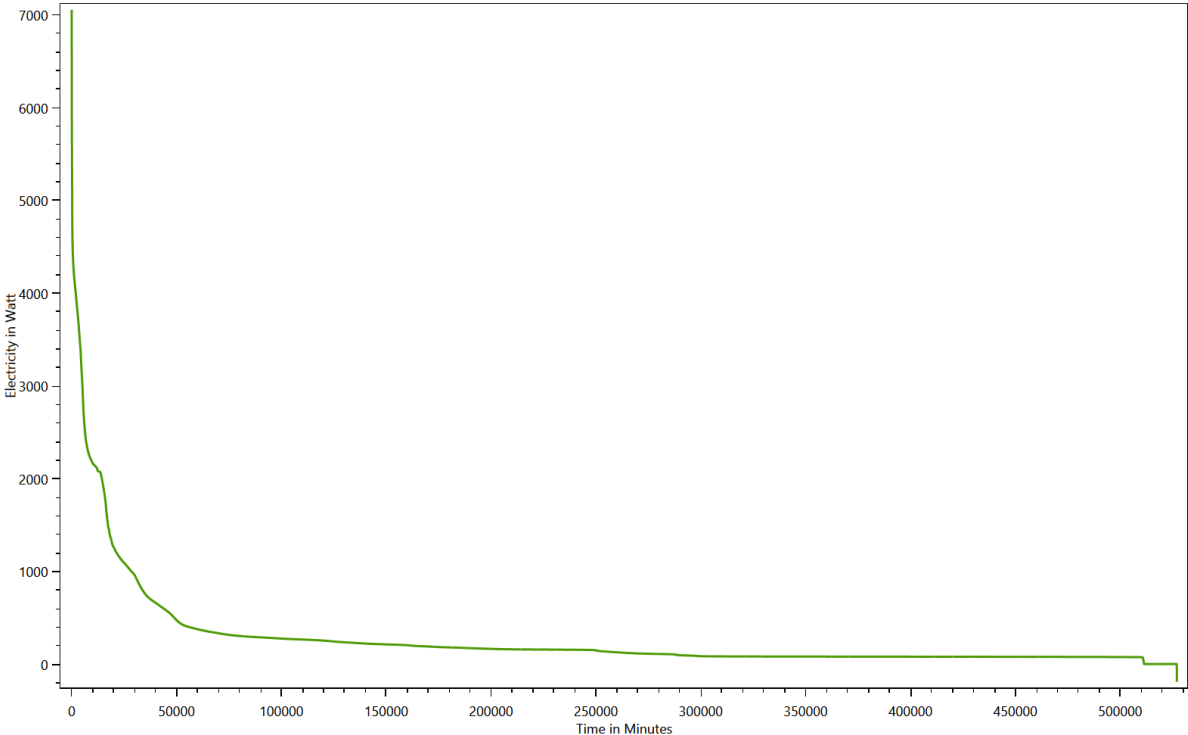
This is made from the files starting with: **DurationCurve**

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

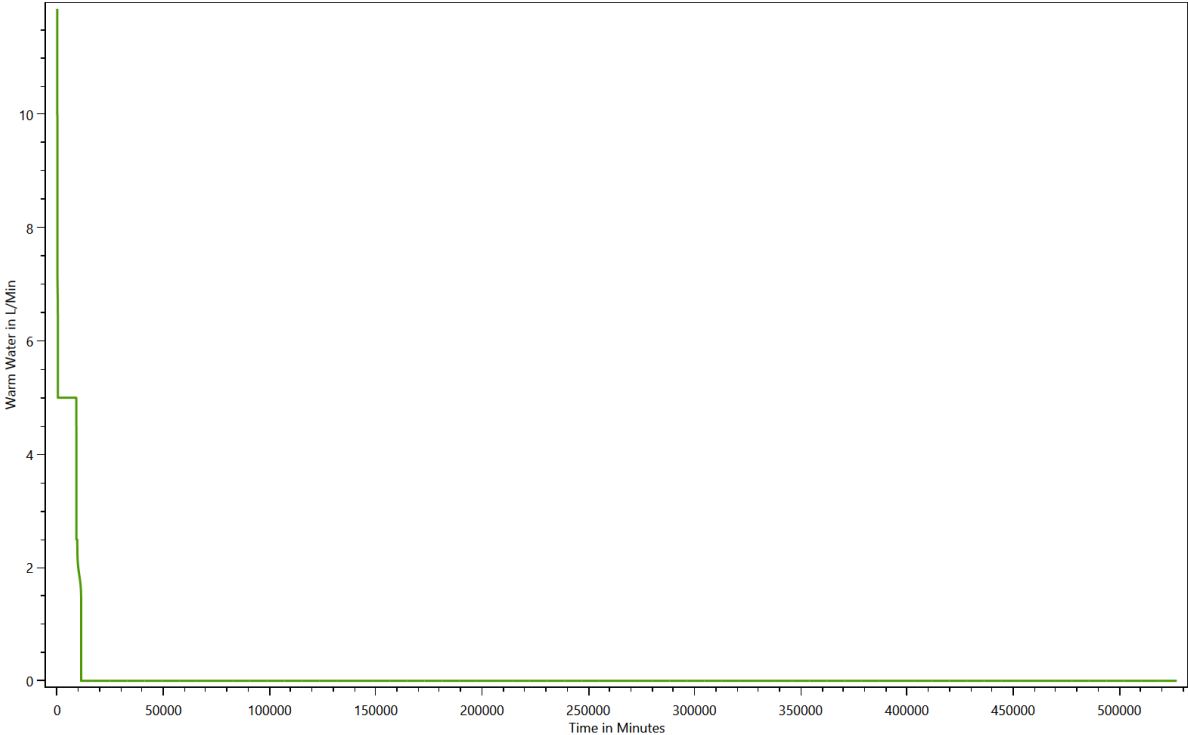
Cold Water



Electricity



Warm Water

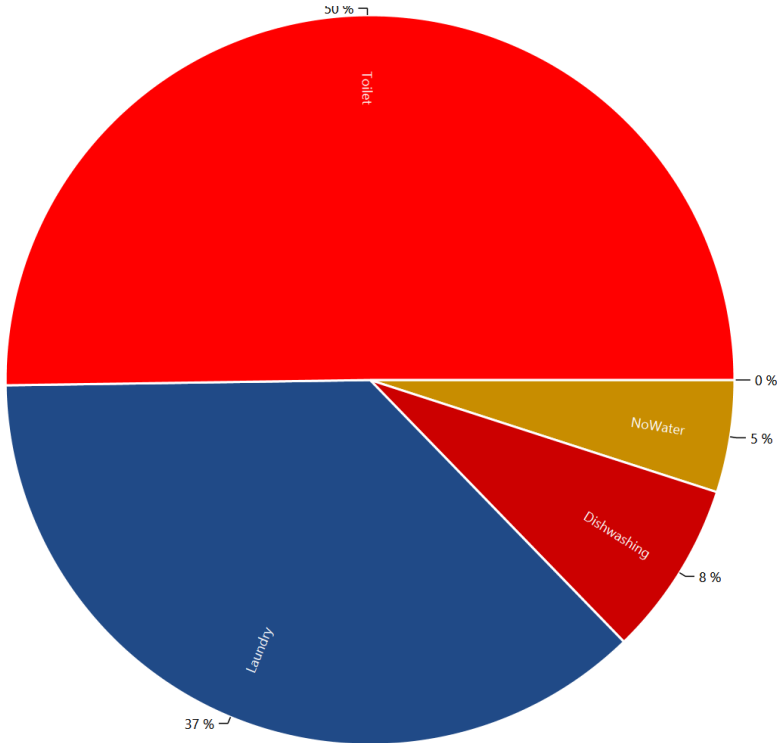


Grouped energy use for each load type for each device

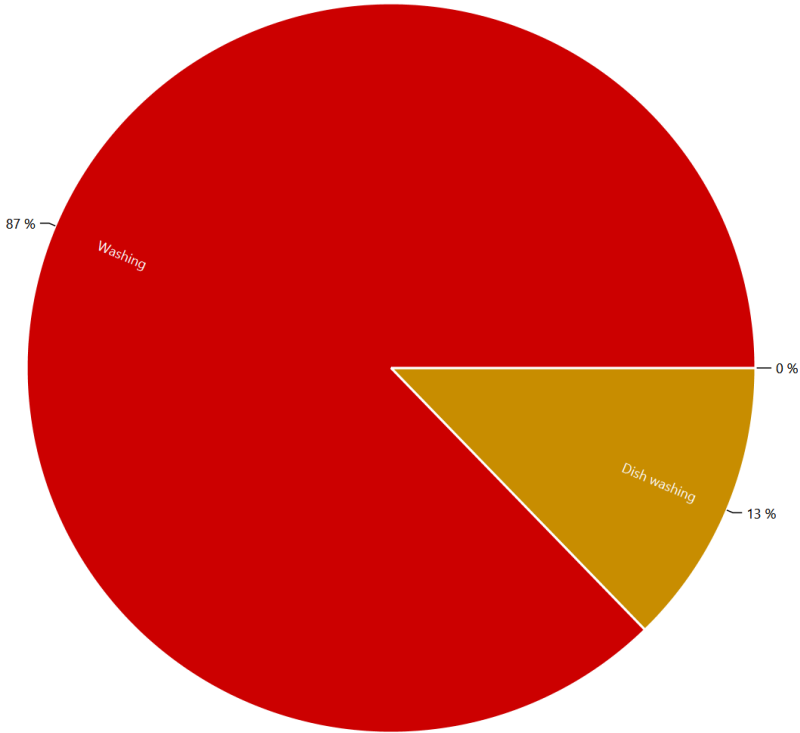
This is made from the files starting with: DeviceTaggingSet

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

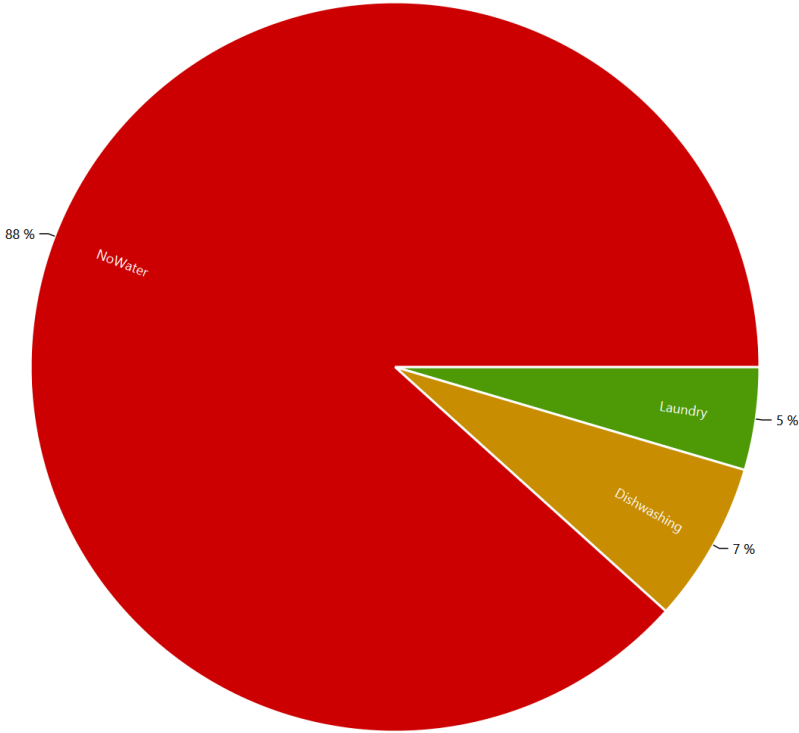
HH0 - Destatis Water Usage Statistics - Cold Water



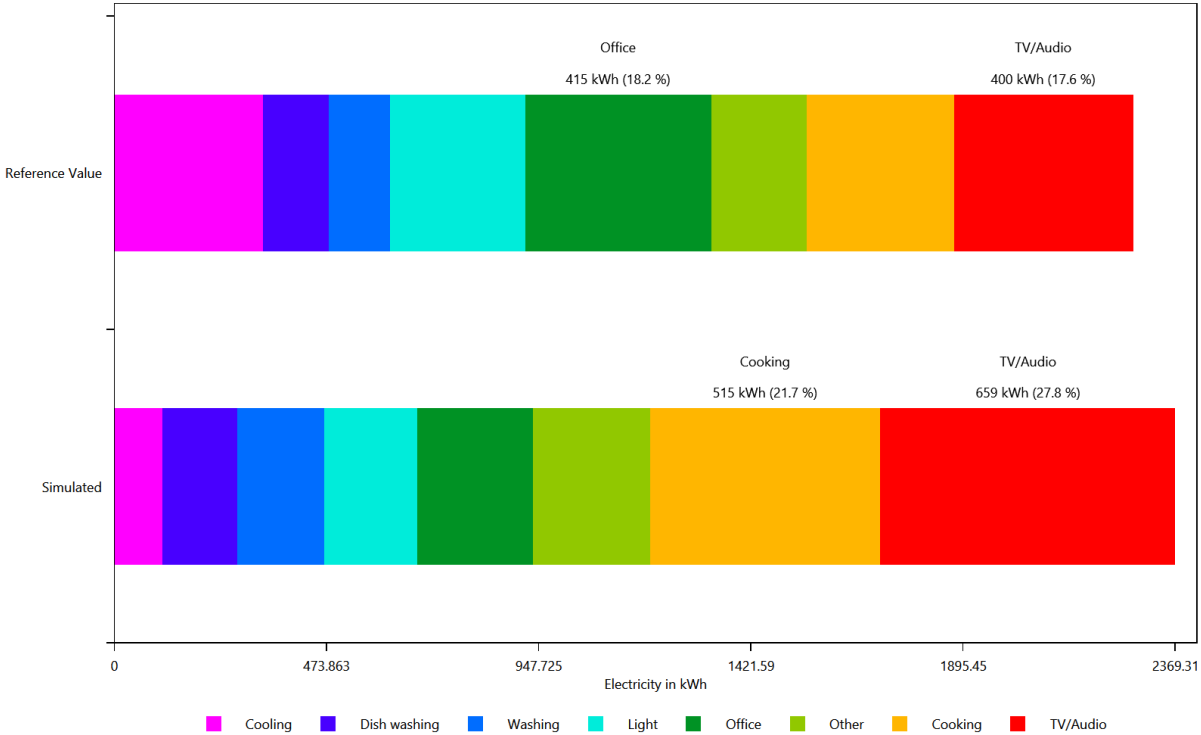
HH0 - Energieagentur - Cold Water



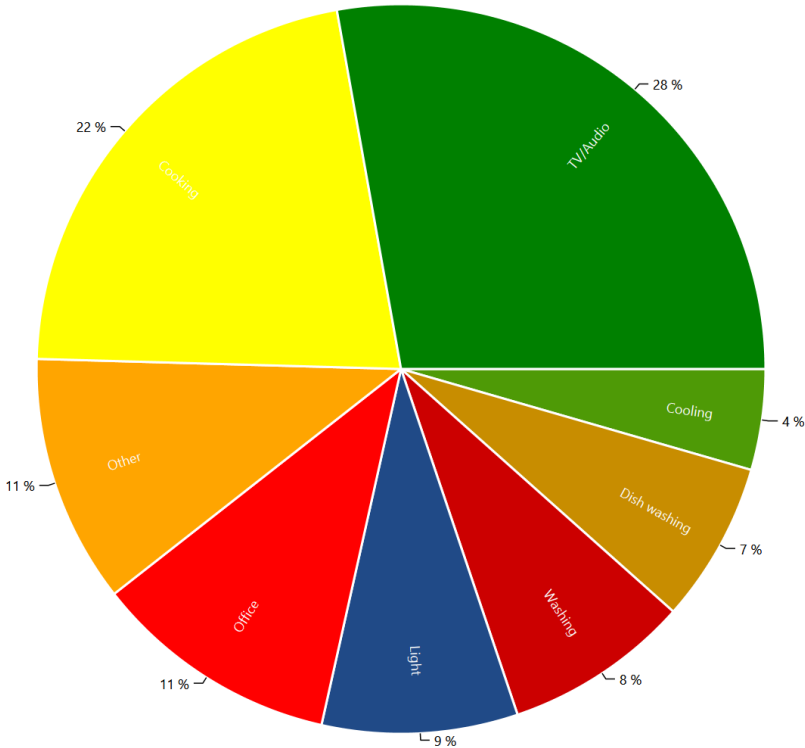
HH0 - Destatis Water Usage Statistics - Electricity



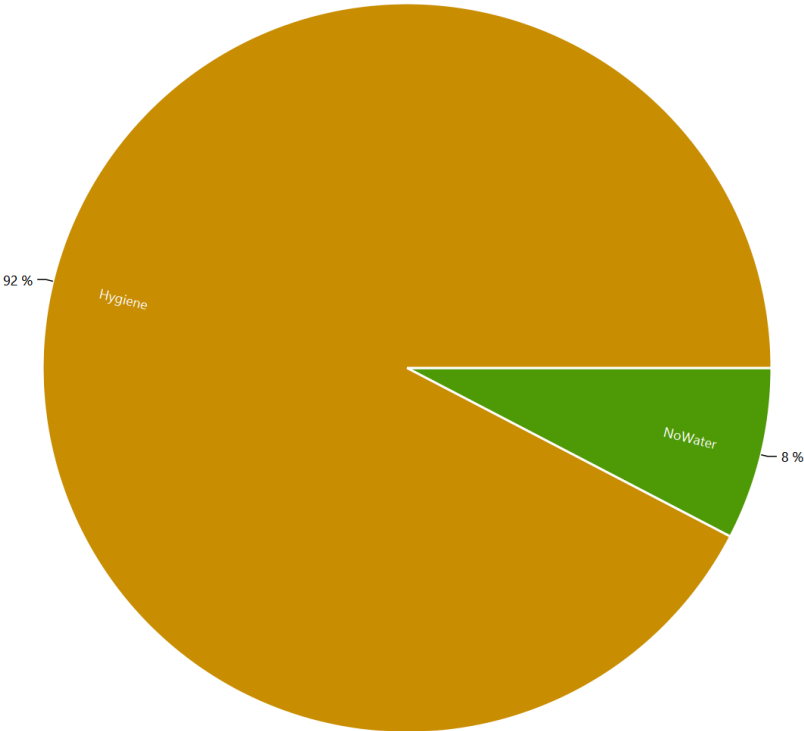
HH0 - Energieagentur - Electricity



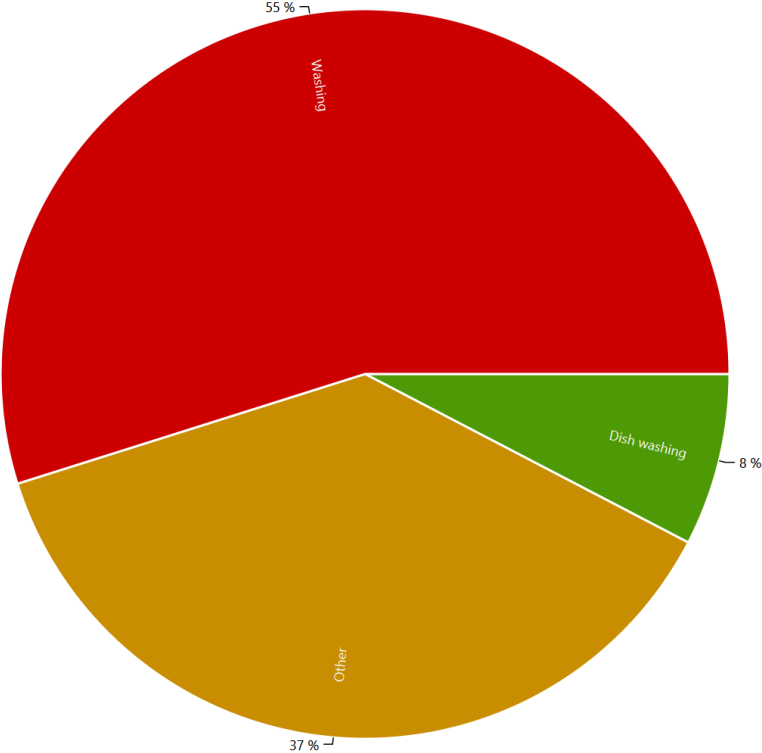
HH0 - Energieagentur - Electricity



HH0 - Destatis Water Usage Statistics - Warm Water



HH0 - Energieagentur - Warm Water

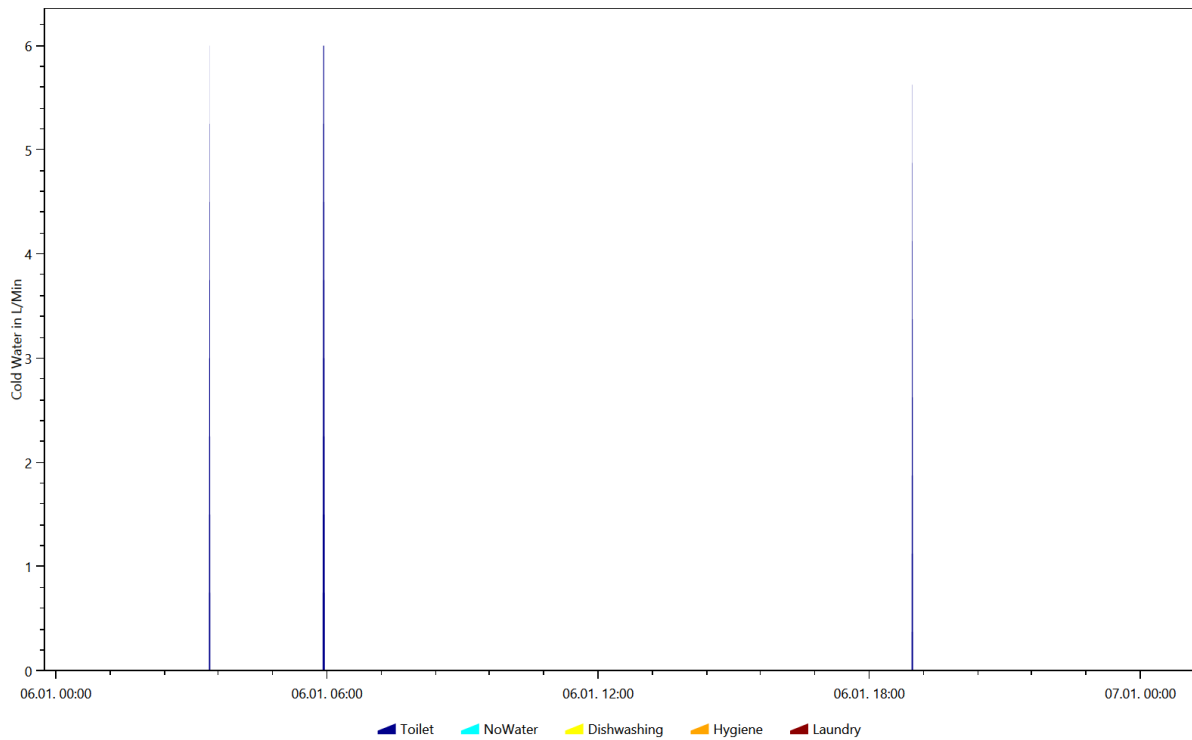


Example of the device profiles for each load type

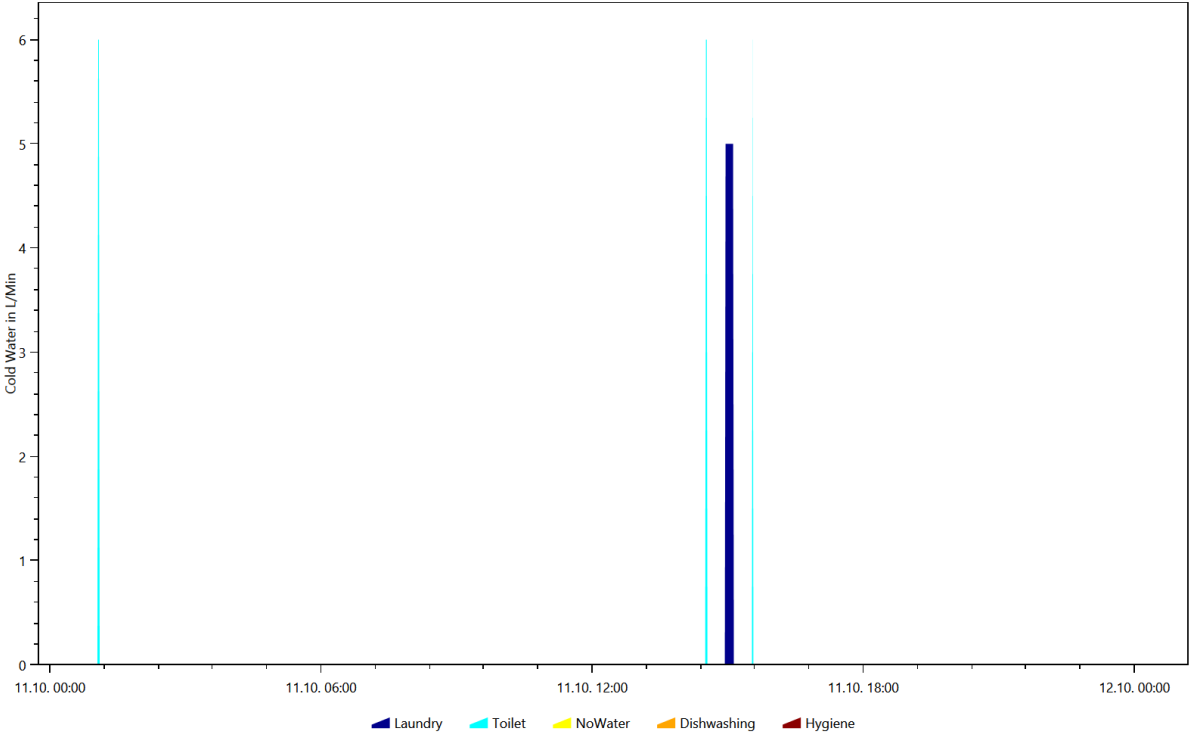
This is made from the files starting with: DeviceProfiles

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

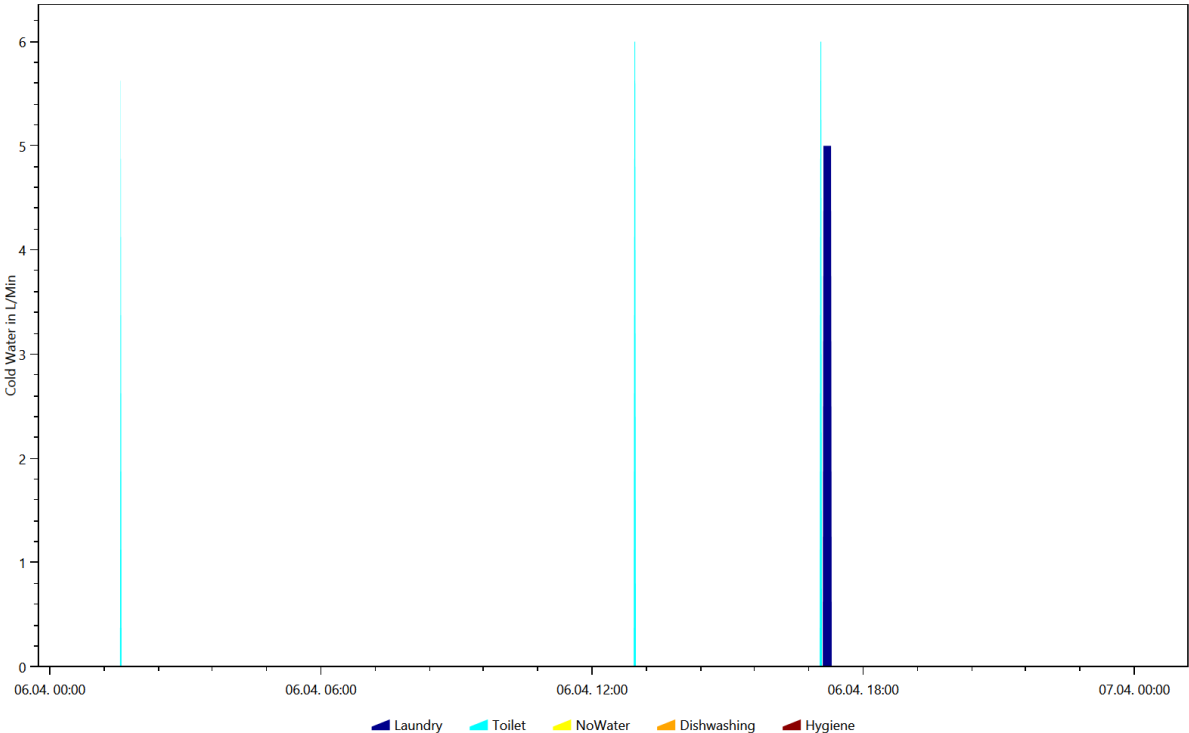
Cold Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.1.6



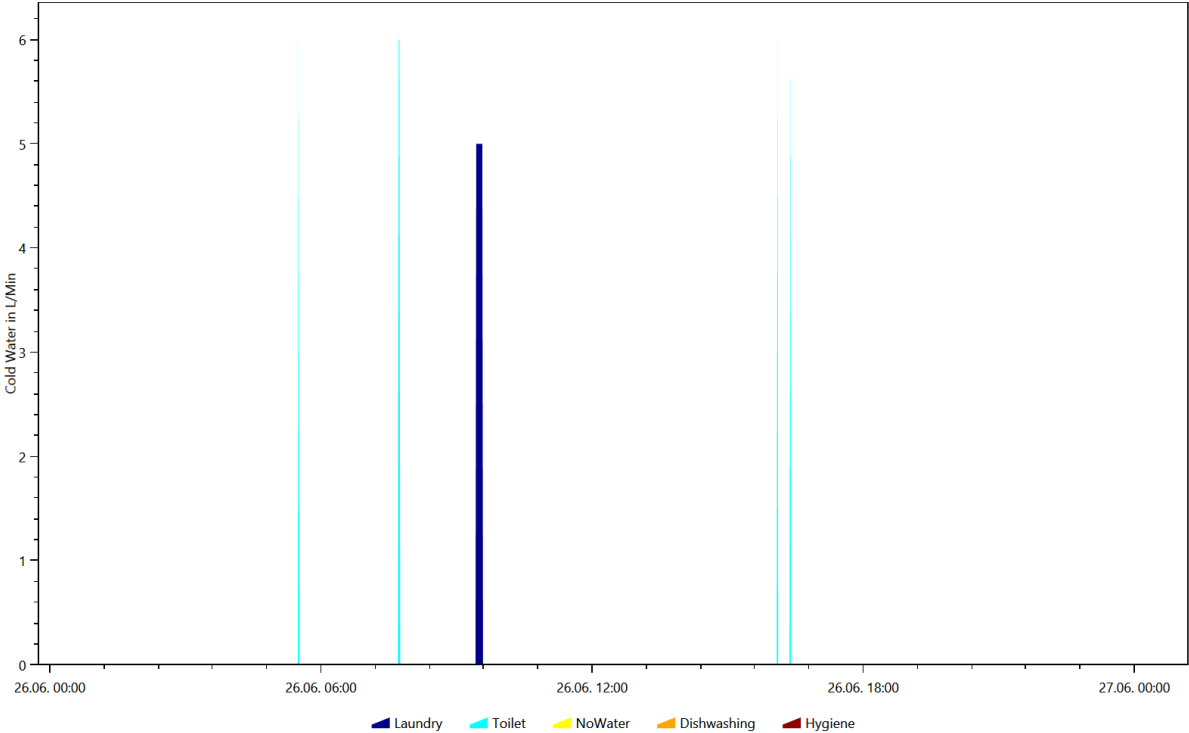
Cold Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.10.11



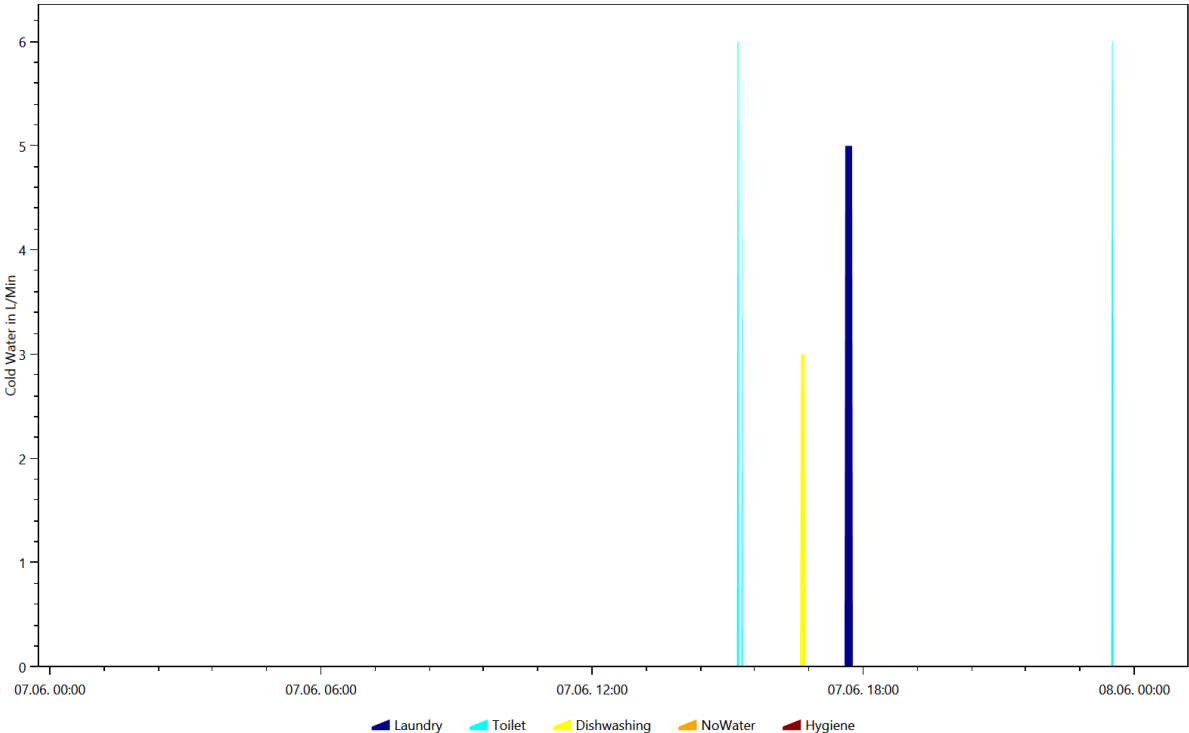
Cold Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.4.6



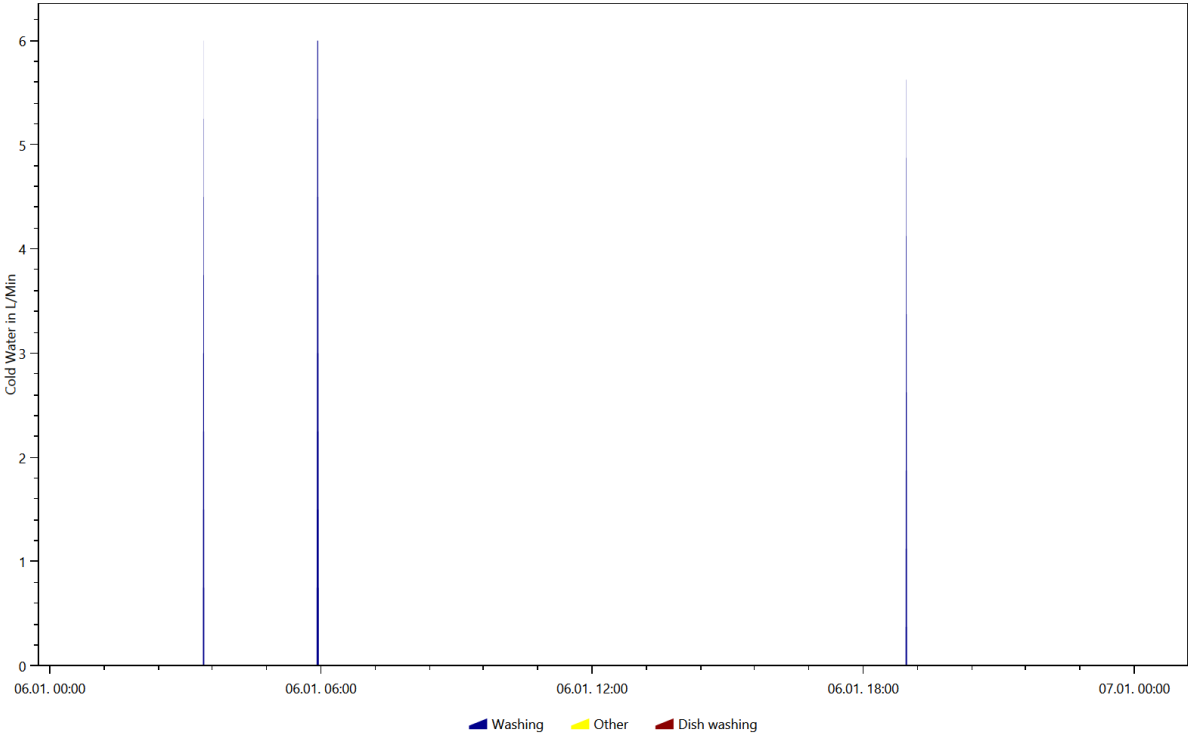
Cold Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.6.26



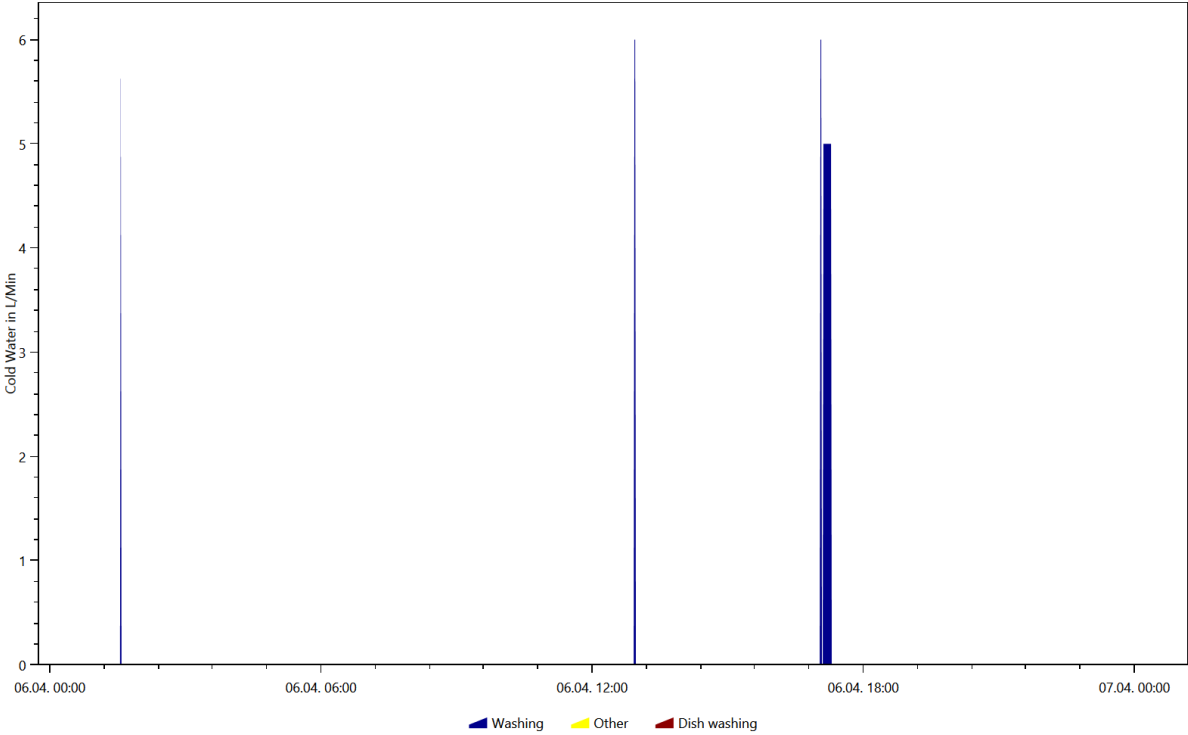
Cold Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.6.7



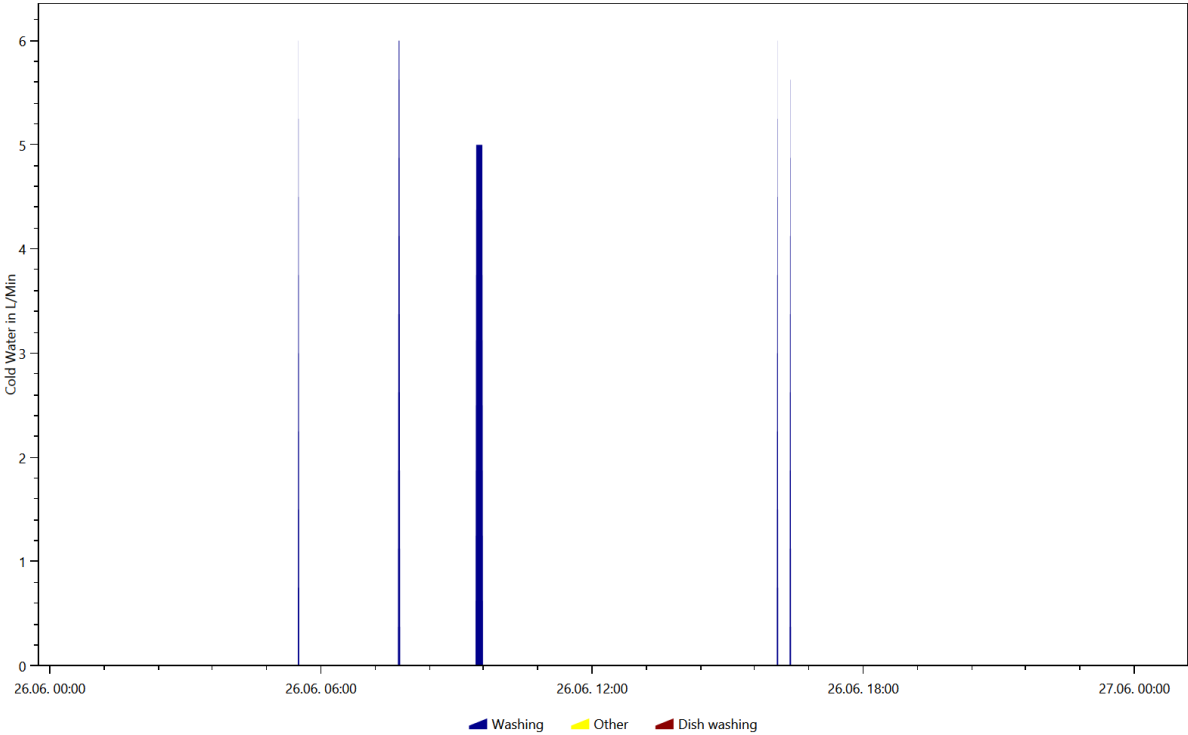
Cold Water, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.1.6



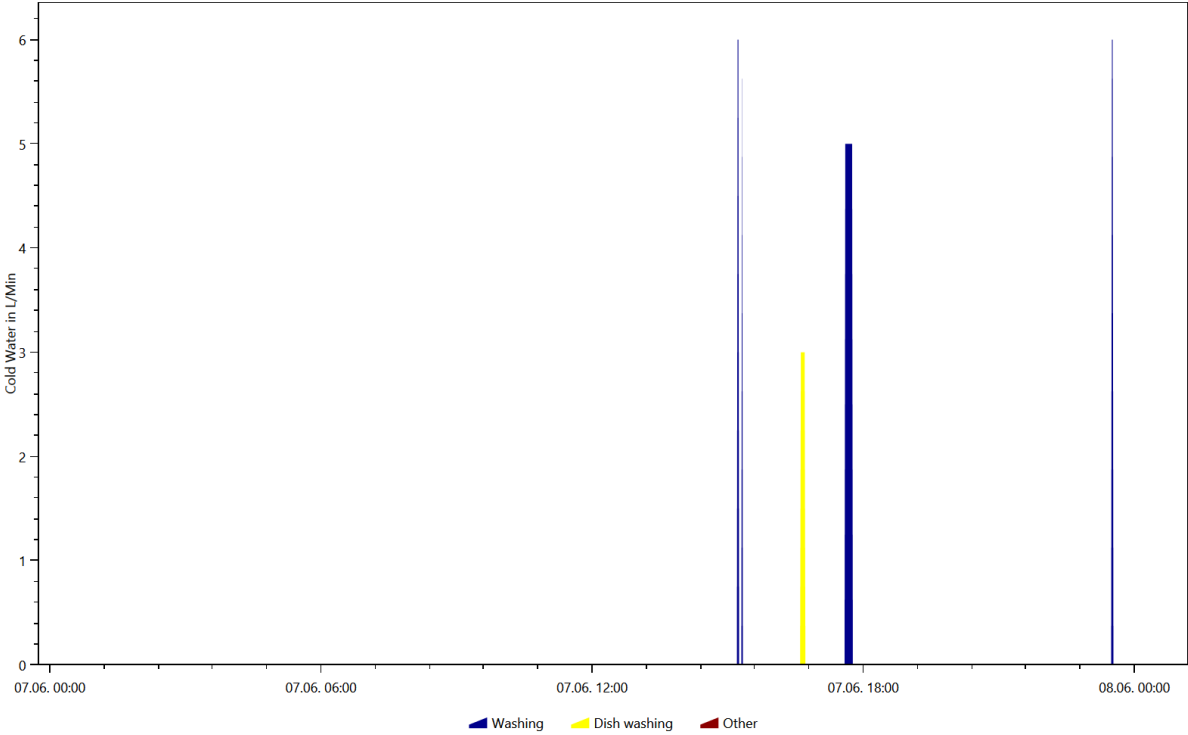
Cold Water, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.4.6



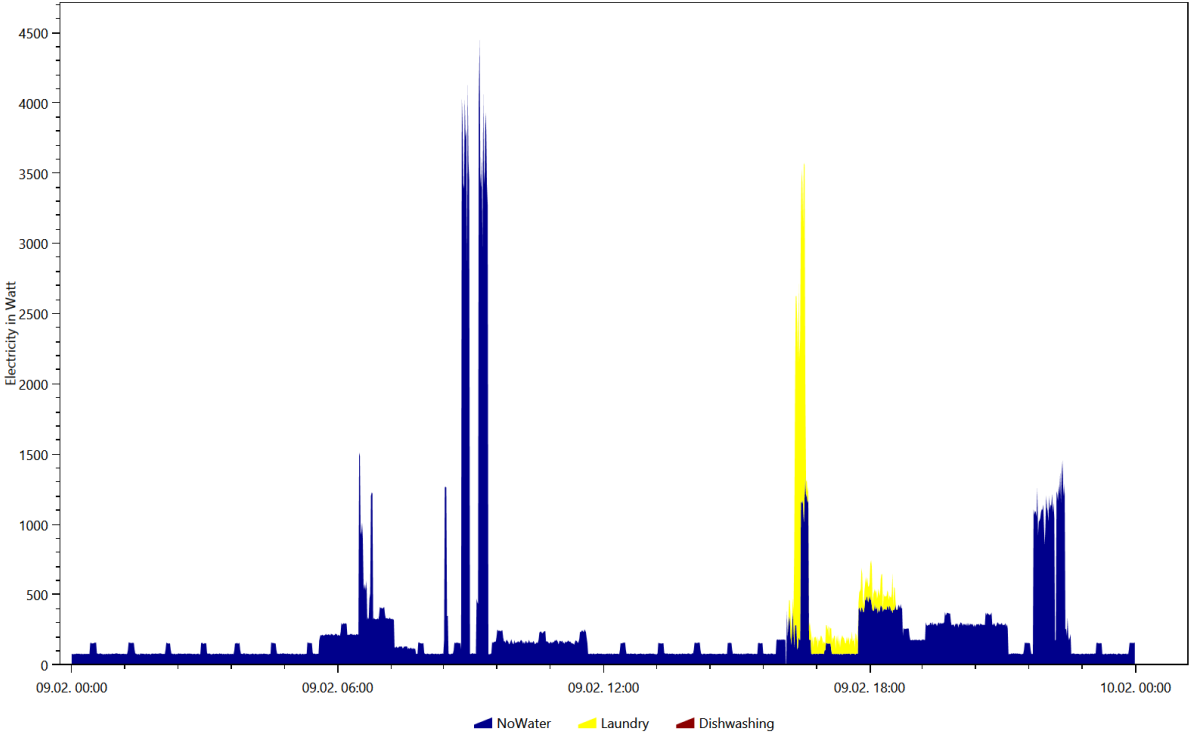
Cold Water, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.6.26



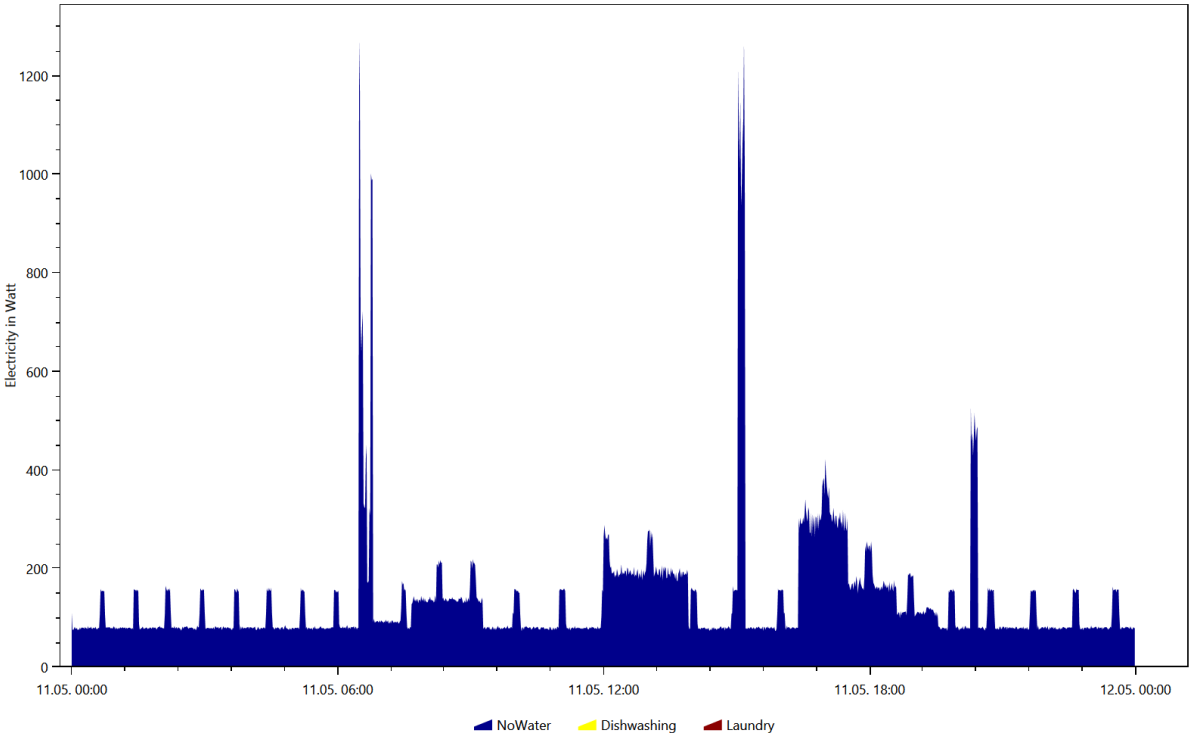
Cold Water, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.6.7



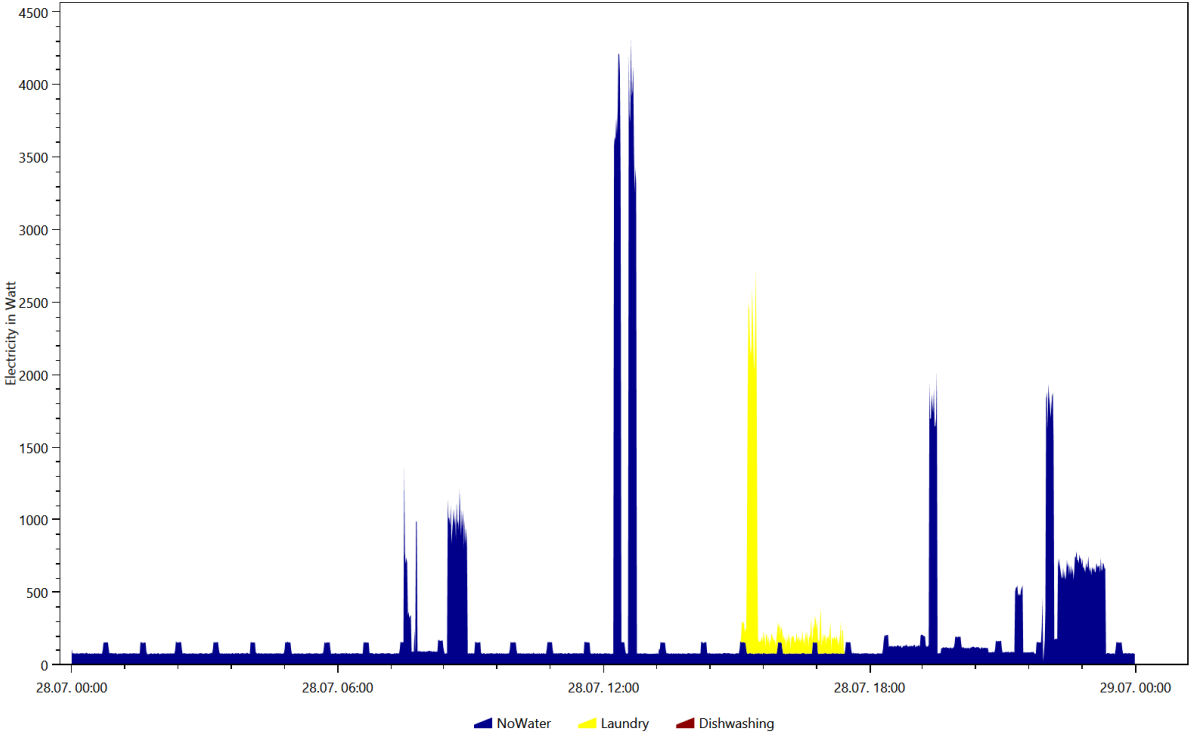
Electricity, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.2.9



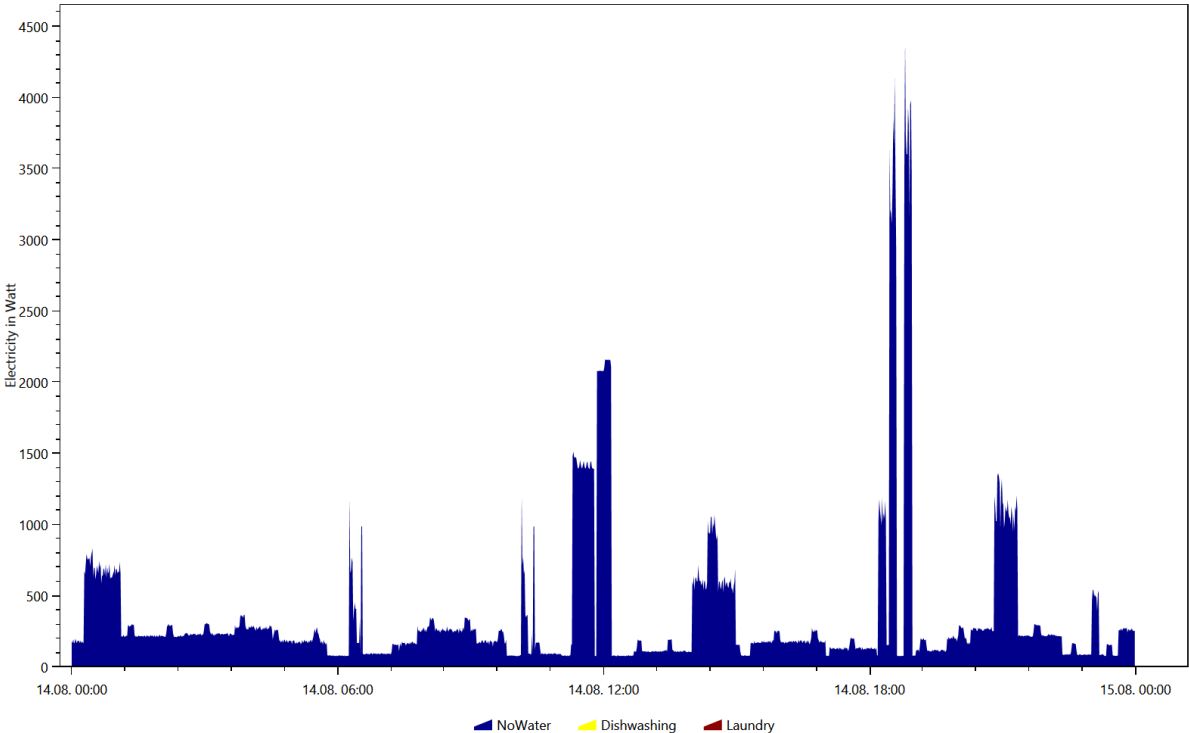
Electricity, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.5.11



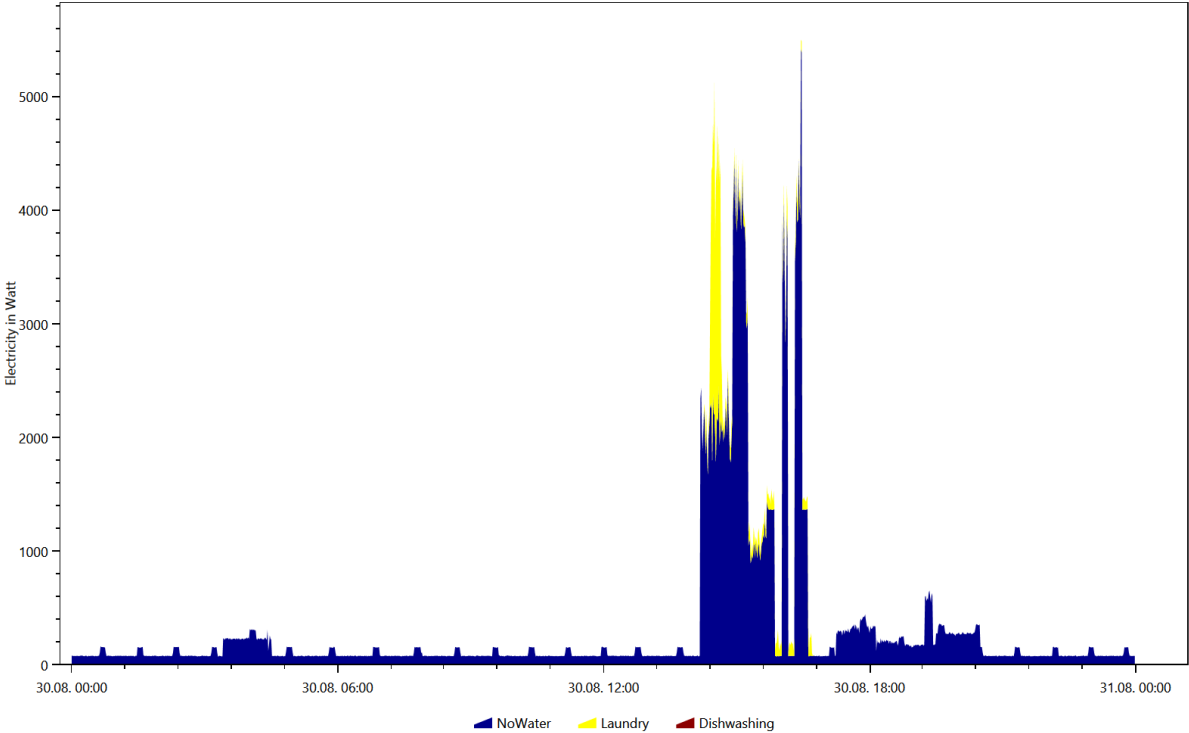
Electricity, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.7.28



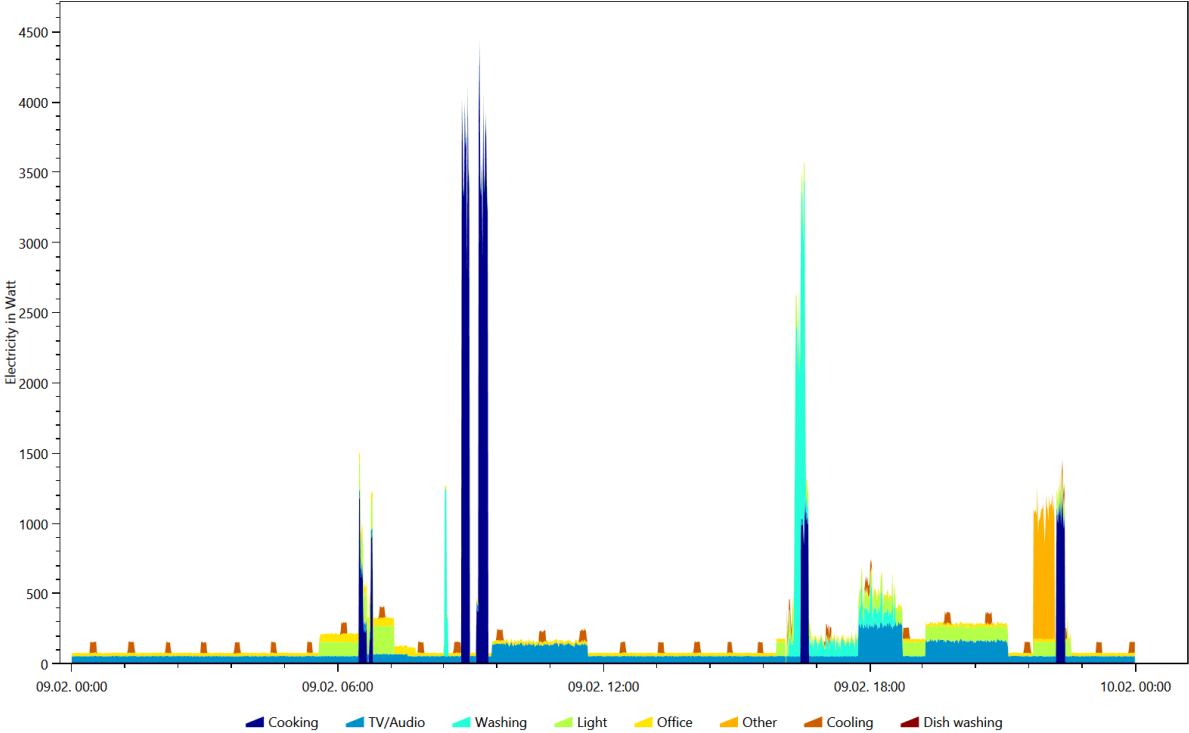
Electricity, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.8.14



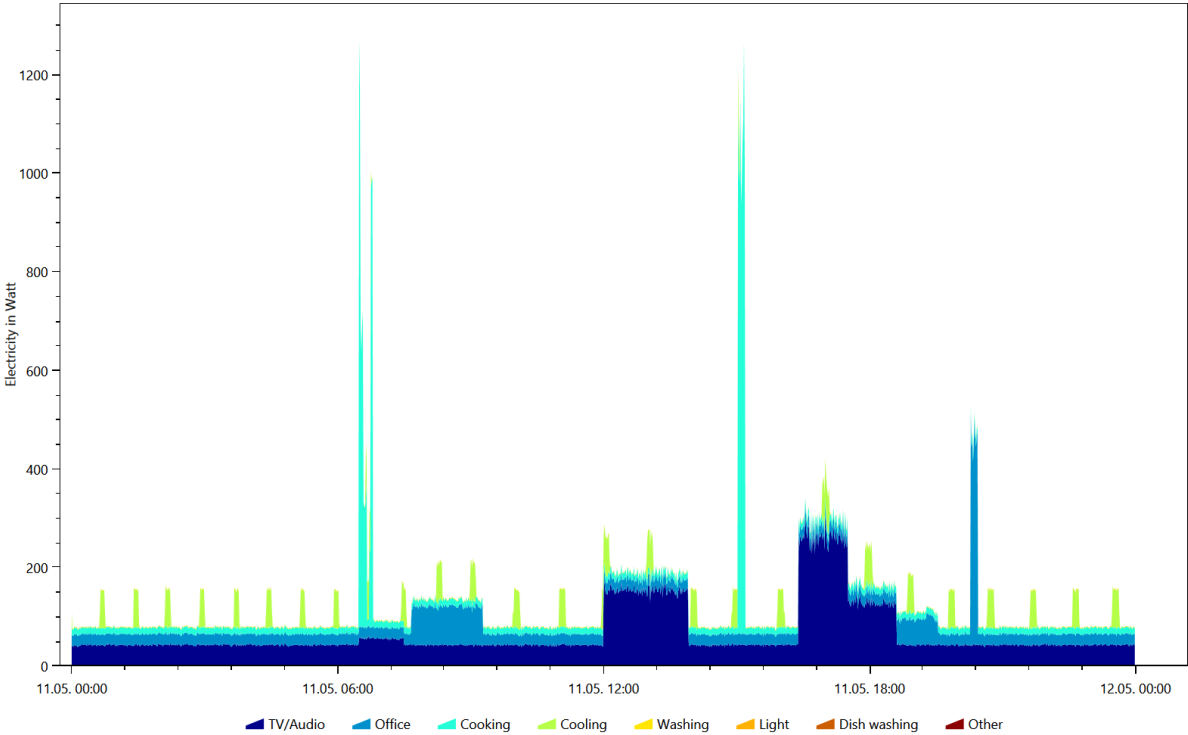
Electricity, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.8.30



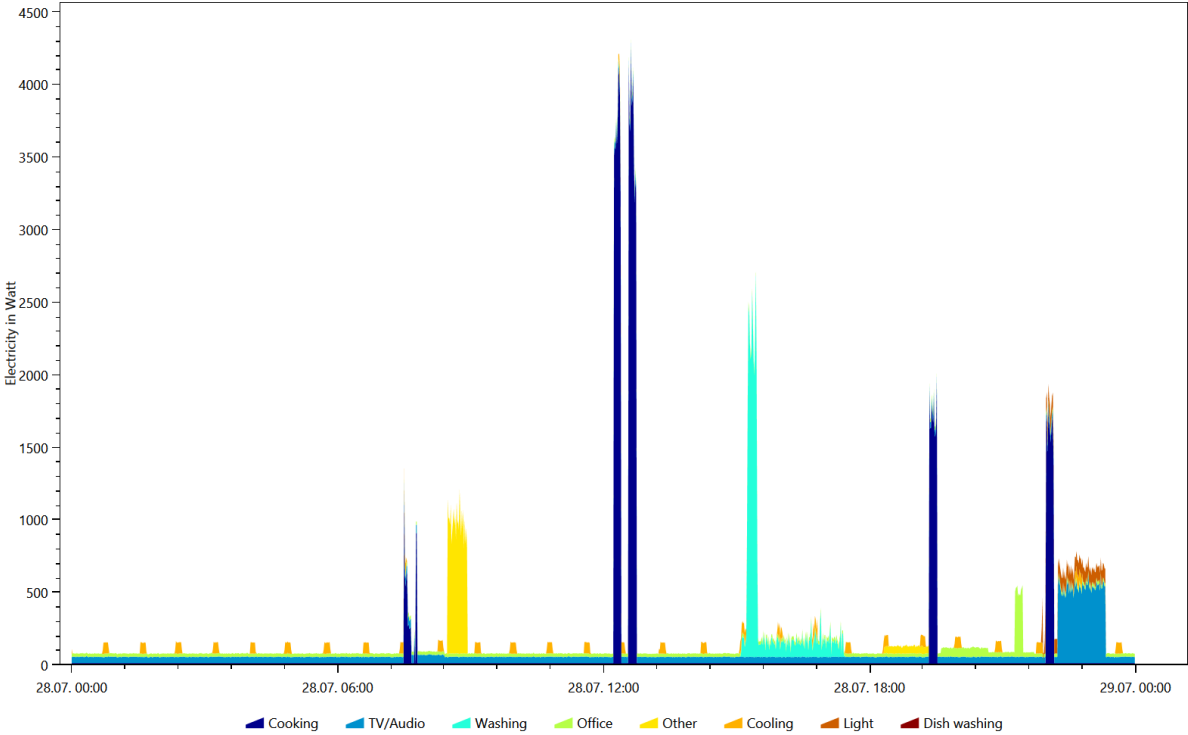
Electricity, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.2.9



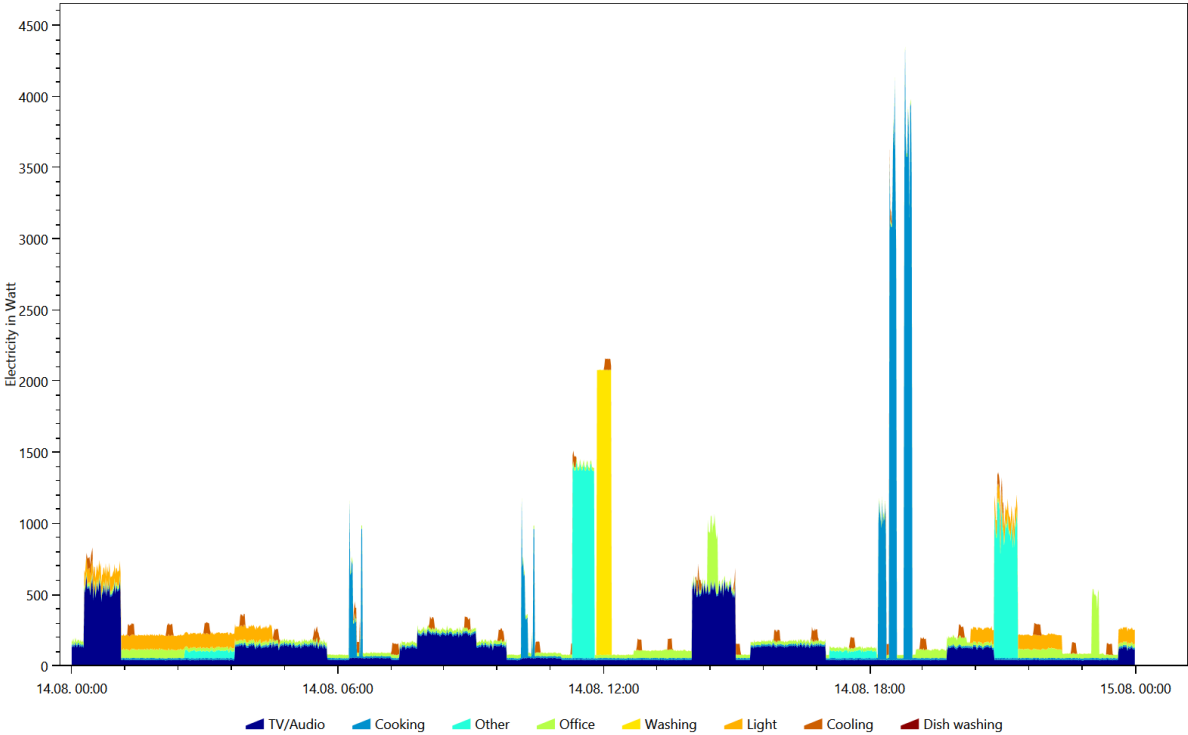
Electricity, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.5.11



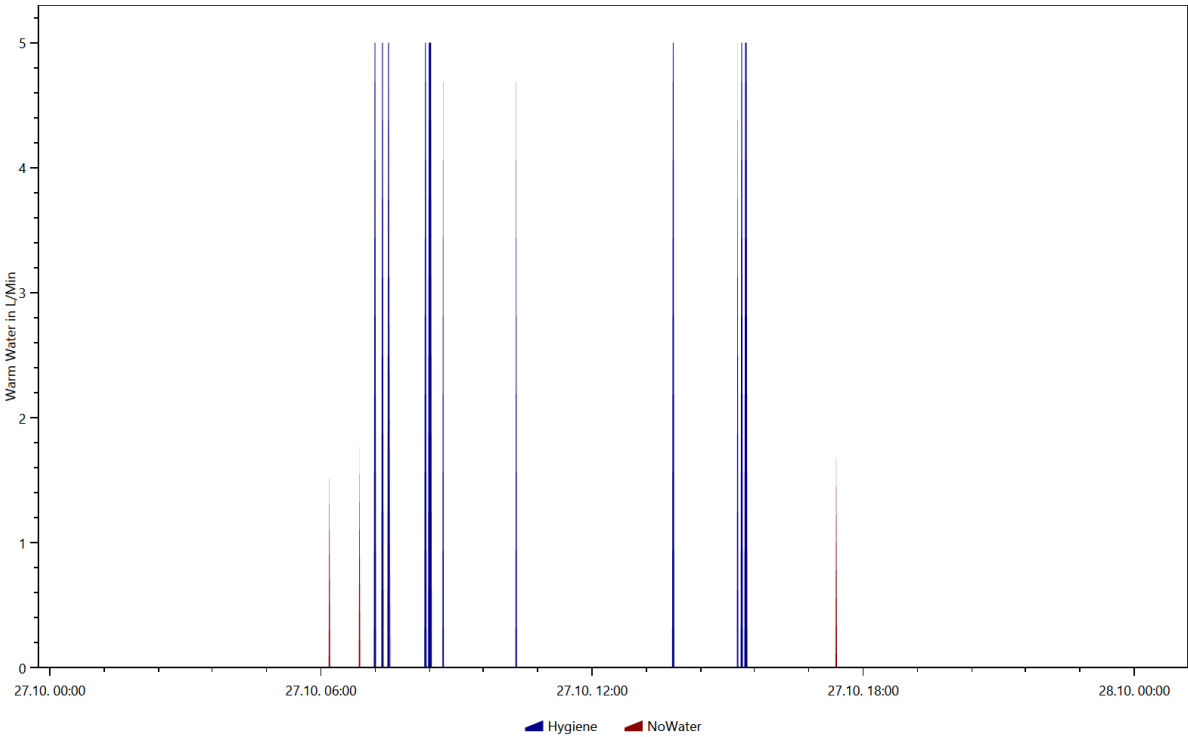
Electricity, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.7.28



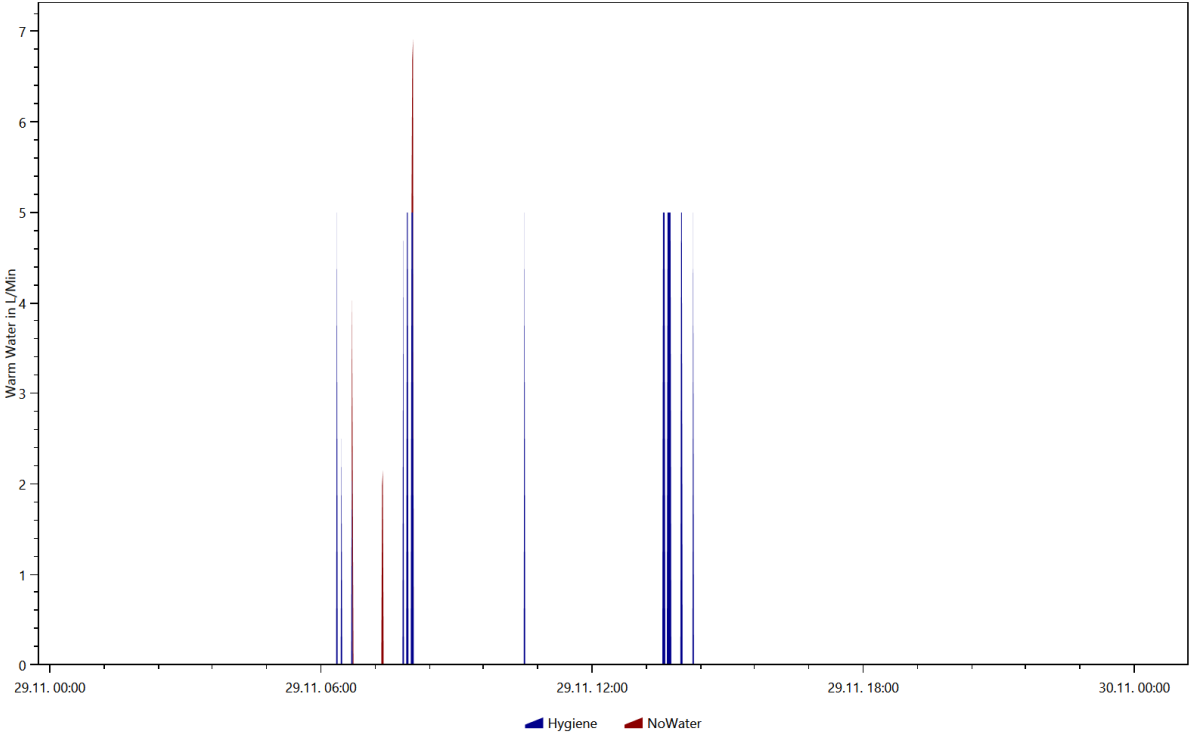
Electricity, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.8.14



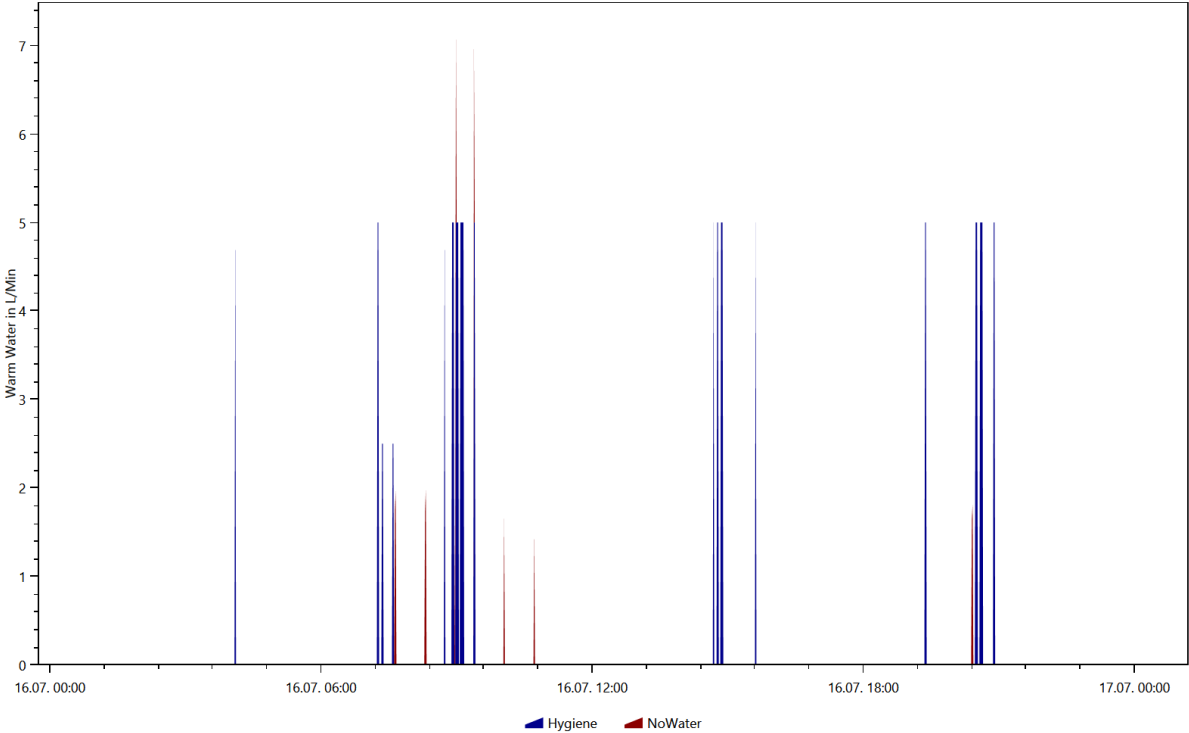
Warm Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.10.27



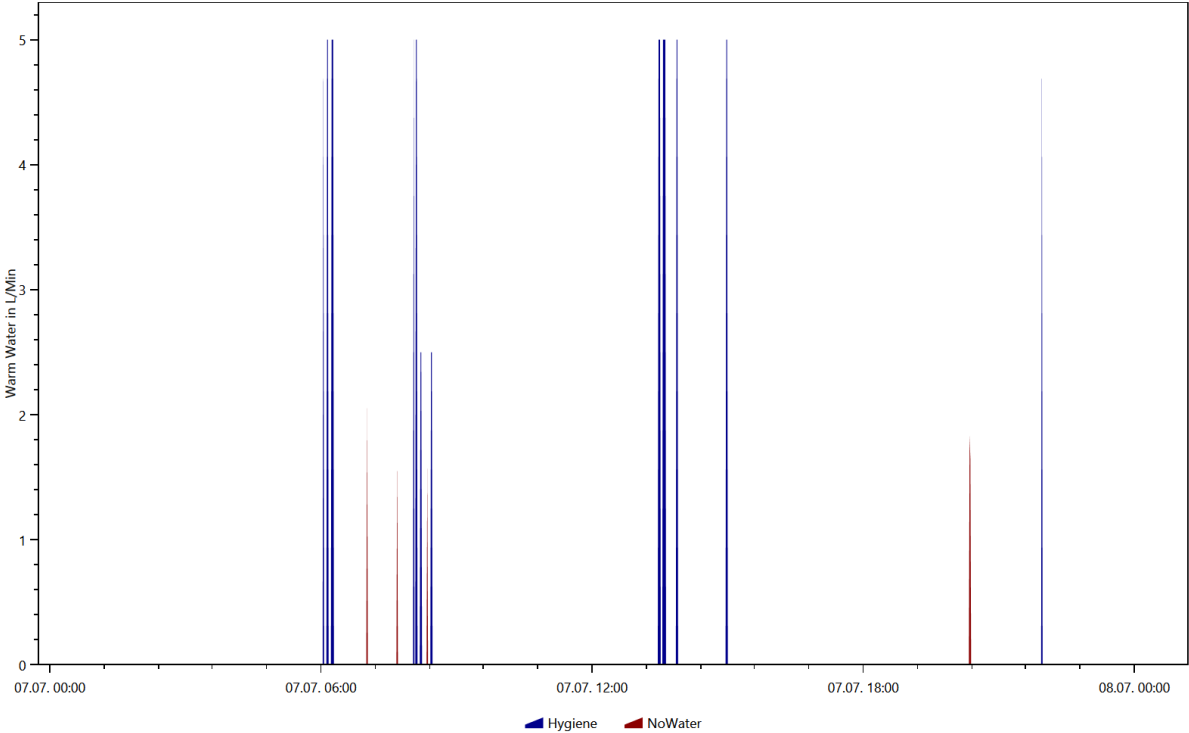
Warm Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.11.29



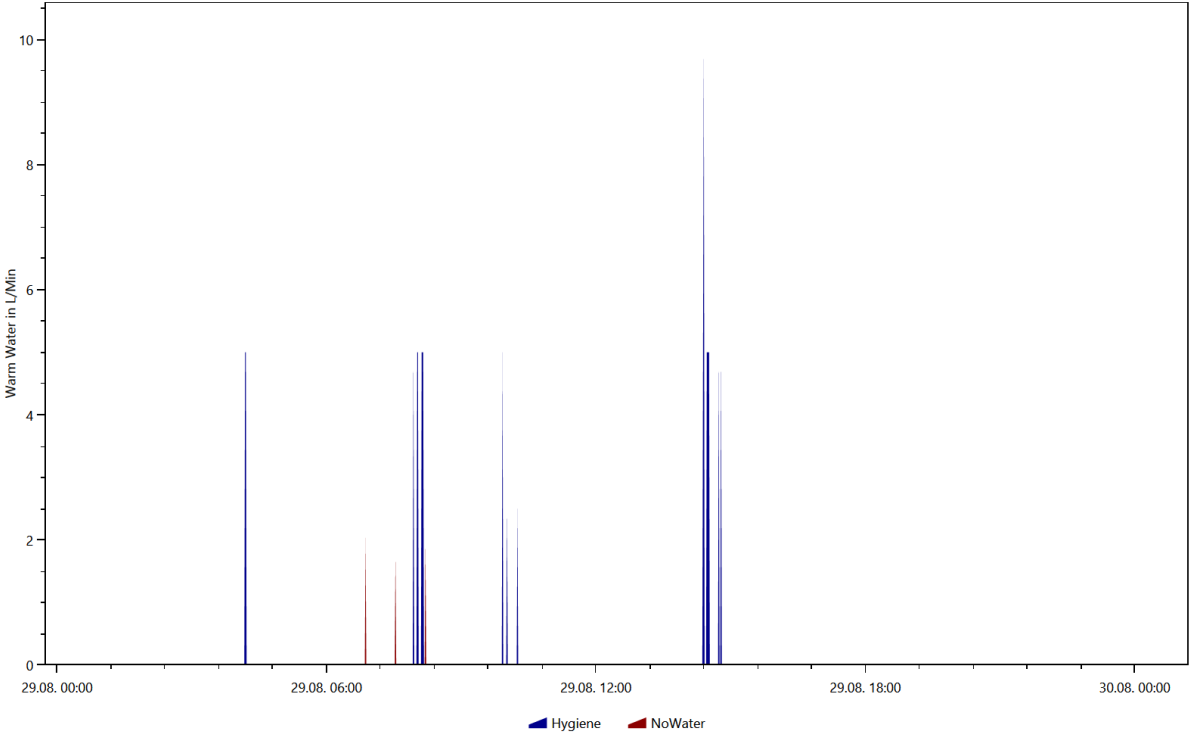
Warm Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.7.16



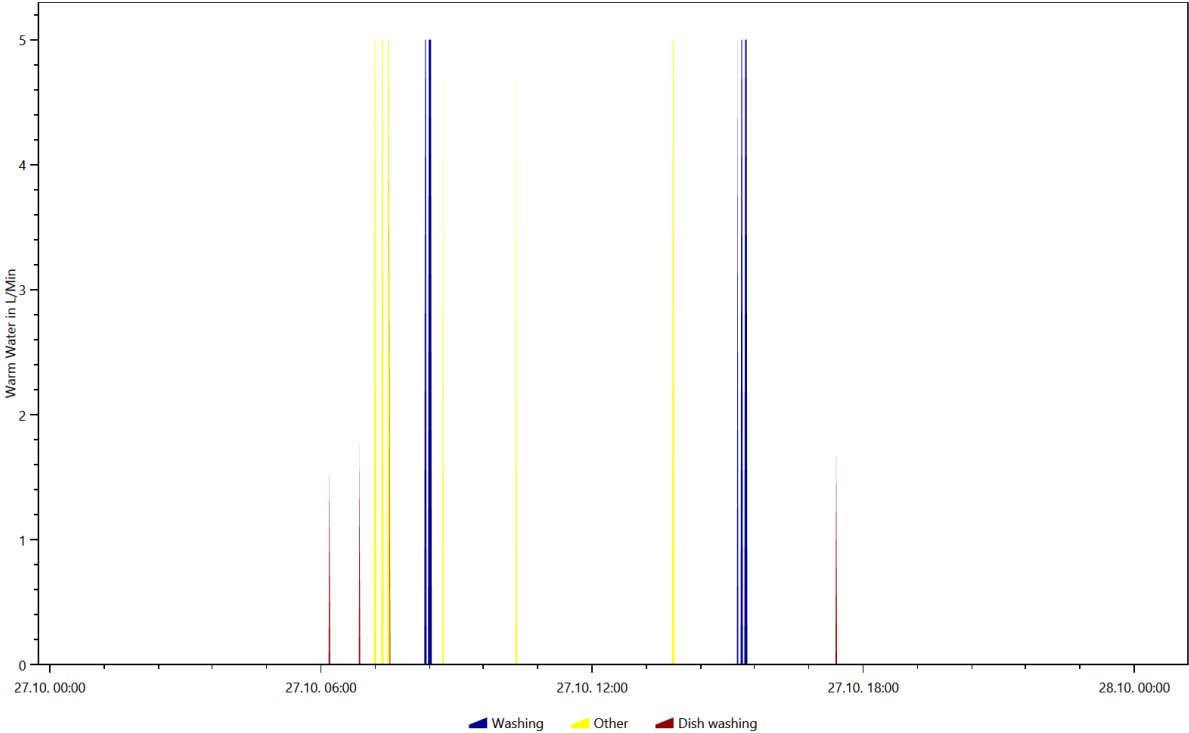
Warm Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.7.7



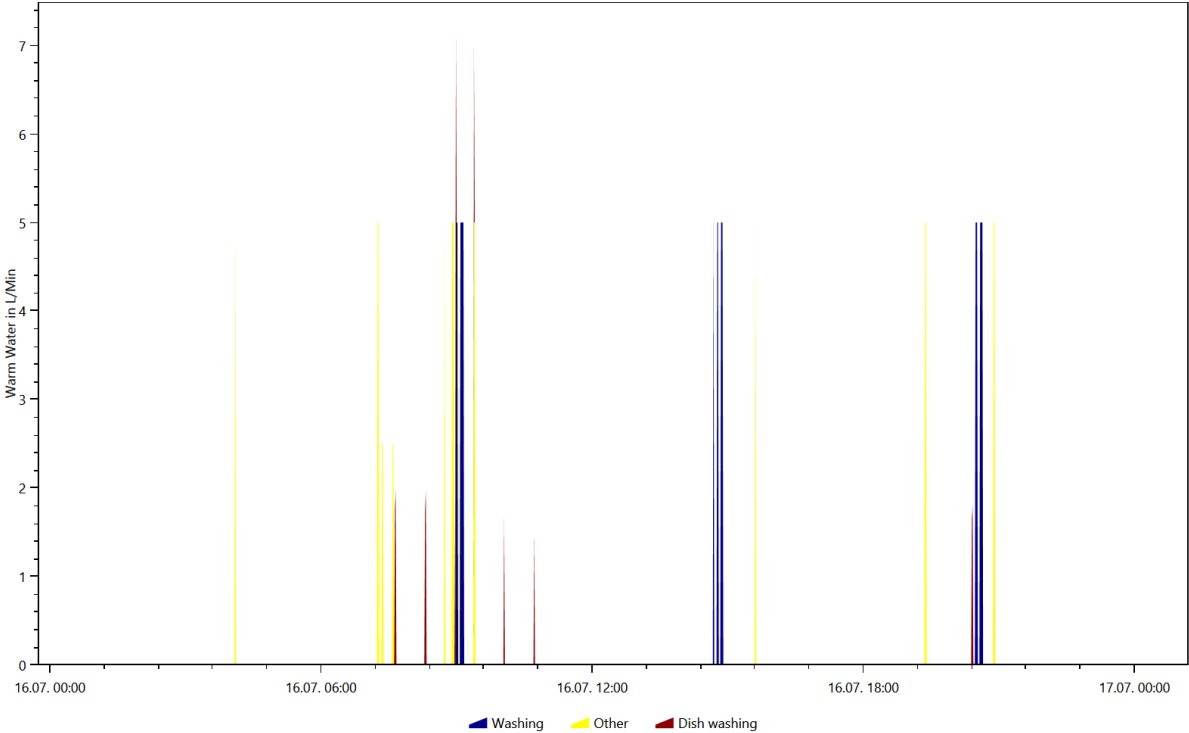
Warm Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.8.29



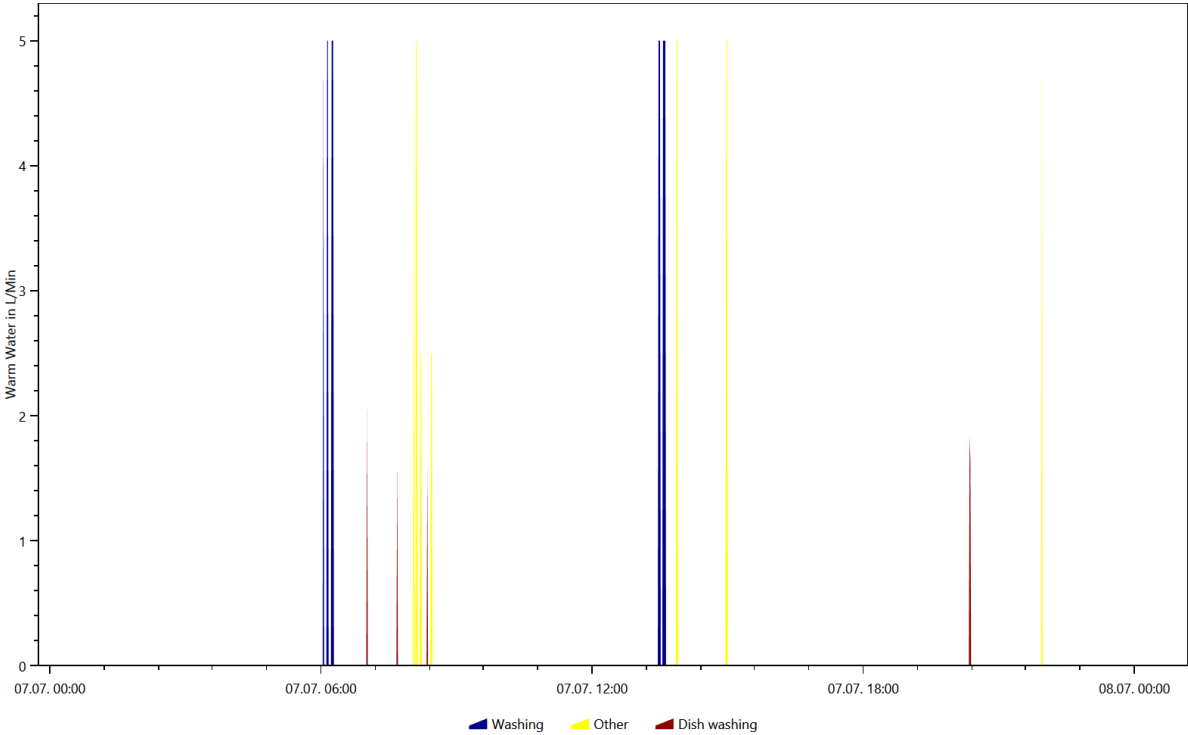
Warm Water, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.10.27



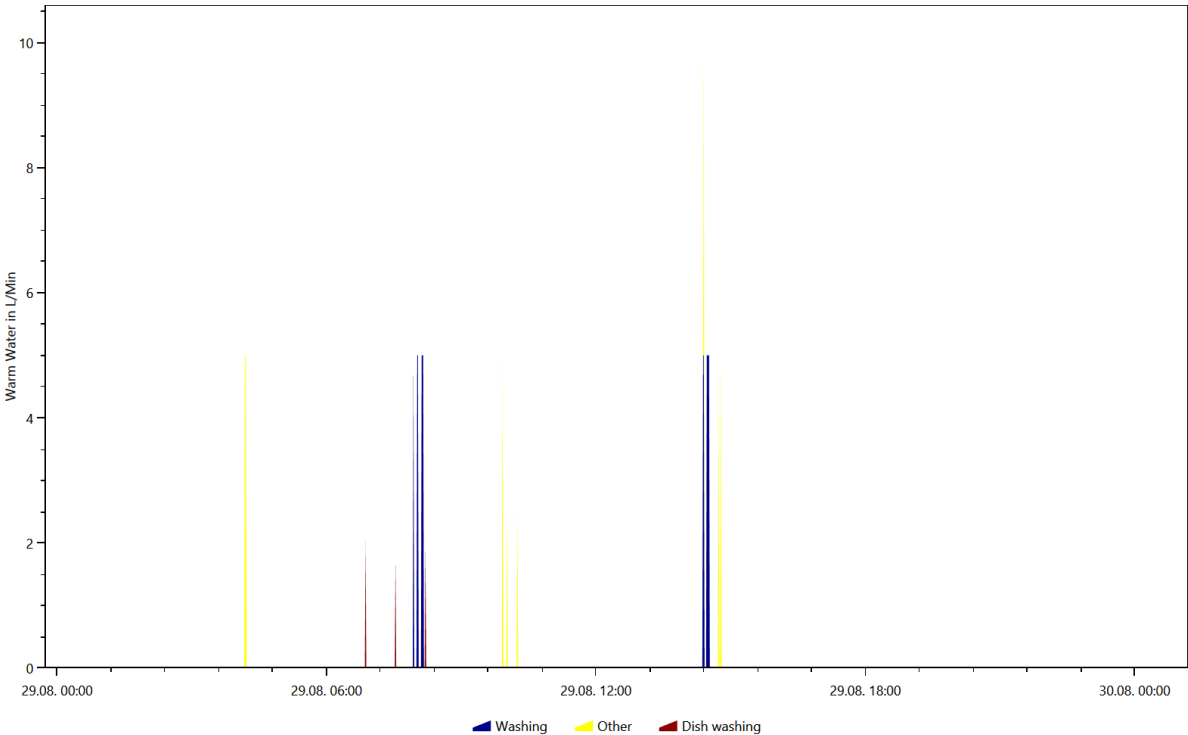
Warm Water, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.7.16



Warm Water, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.7.7



Warm Water, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.8.29

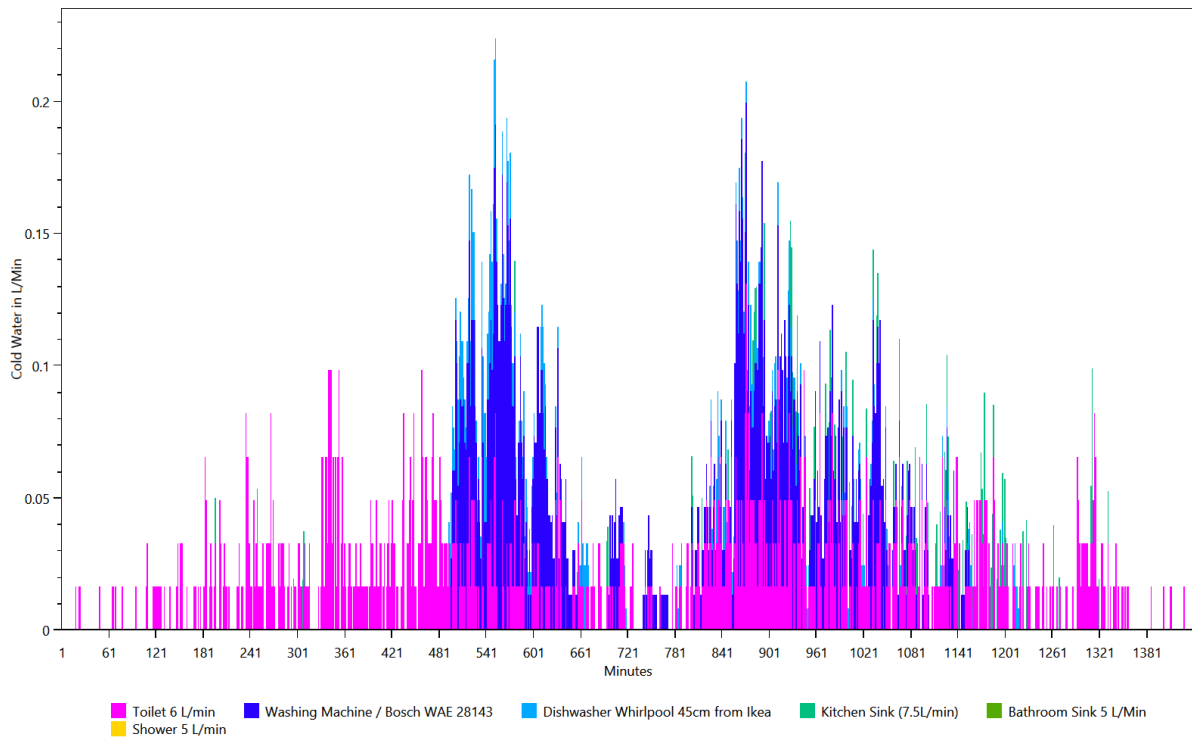


Overview of the time and power of the use per load type per device

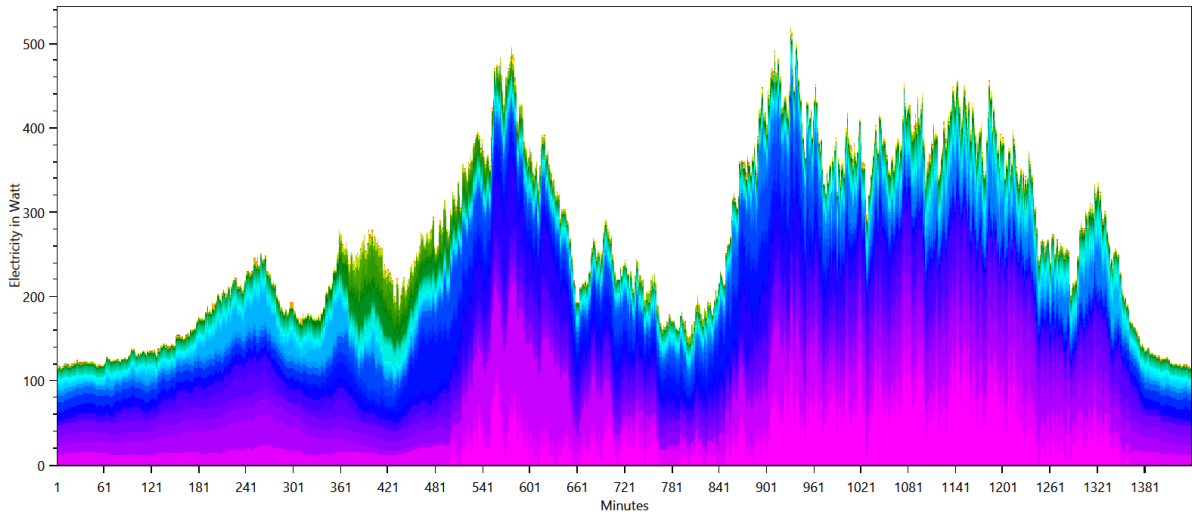
This is made from the files starting with: **TimeOfUseEnergyProfiles**

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

Cold Water

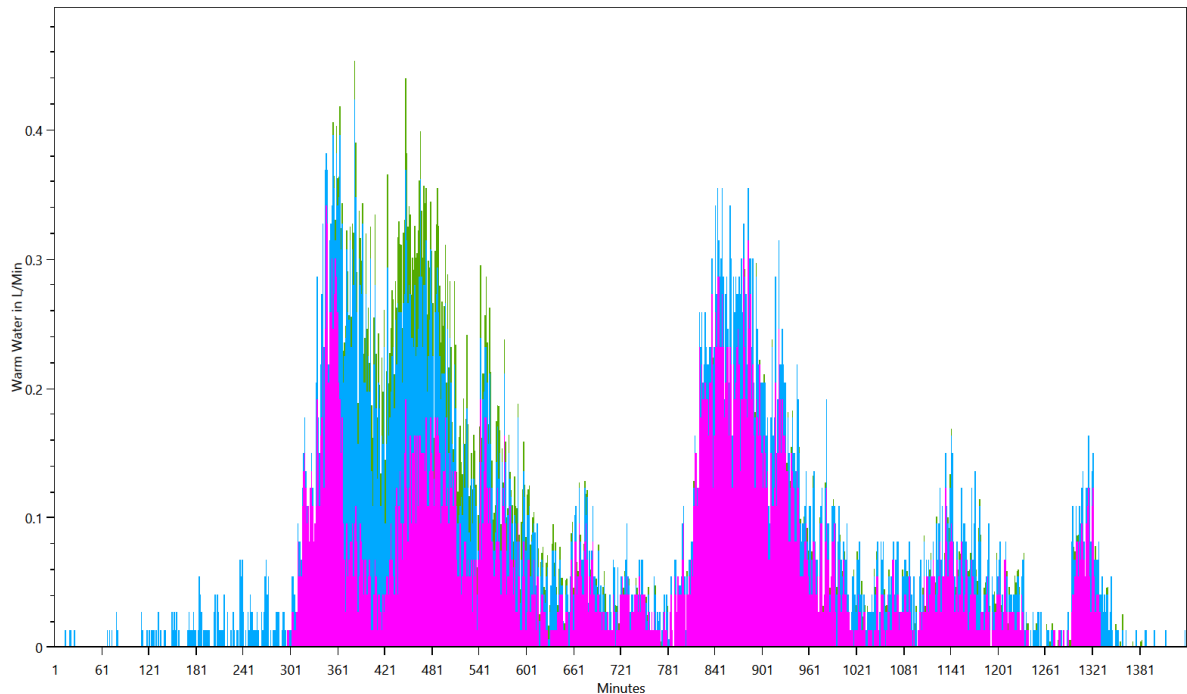


Electricity



- Miele H 5241 B
- Panasonic TX-P58V10E
- Dishwasher Whirlpool 45cm from Ikea
- Living Room Light (100W)
- Sony PlayStation 3
- Microwave Panasonic (1991)
- Christopheit Treadmill TM 2 Pro
- TV / Phillips 32PFL7605H
- Washing Machine / Bosch WAE 28143
- Fridge with Freezer Exquisit kgc23060
- Heater / Honeywell BH-888E
- Yamaha RX-V667
- Hair Dryer Babyliss 2000
- Router / AVM FRITZ! Box Fon WLAN 7390
- Kitchen Stove / Bauknecht Heko 750 PT Kitchen stove front left
- Laptop Lenovo Thinkpad x220
- Kitchen Stove / Bauknecht Heko 750 PT Kitchen stove left hind- semi aktiv
- TASKalfa 180
- PC / Acer Aspire T310
- Hifi System / Sharp XL-HF300PH
- Kitchen Light (100W)
- PC Monitor / Fujitsu Siemens Scaleoview H19-1
- Phone Siemens Gigaset C320
- SAT Receiver / Kathrein UFS913
- Nintendo Wii
- Digitalpiano / Kawai CN-23
- CD/DVD Player / Phillips HDR3810/31
- Moulinex electronic 833
- Bathroom Mirror Light 100W (Conventional)
- Kitchen radio / AEG KRC 4323 CD
- Toaster / Tefal Vario
- Egg Cooker / Russell Hobbs 14048-56 Stylo
- Children Room Light (100W)
- Vacuum Cleaner FIF
- Electric Razor Braun Cruzer 5
- Nespresso Coffee Machine, Single Cup
- Bathroom Light (20W)
- Miele DA 249-2
- Handmixer / Phillips Robust HR 1581
- Epson Stylus S20
- Electric Toothbrush Dondodent Professional Clean
- Electric Kettle / Petra WK288 1.5L
- Food Slicer / DOMO Schneidemaschine D0521S
- External Harddrive omeqa 3.5"
- Fancy Ceiling Lights with at least 3 Bulbs
- Bedroom Light (60W)
- Canon CanoScan LIDE 110

Warm Water



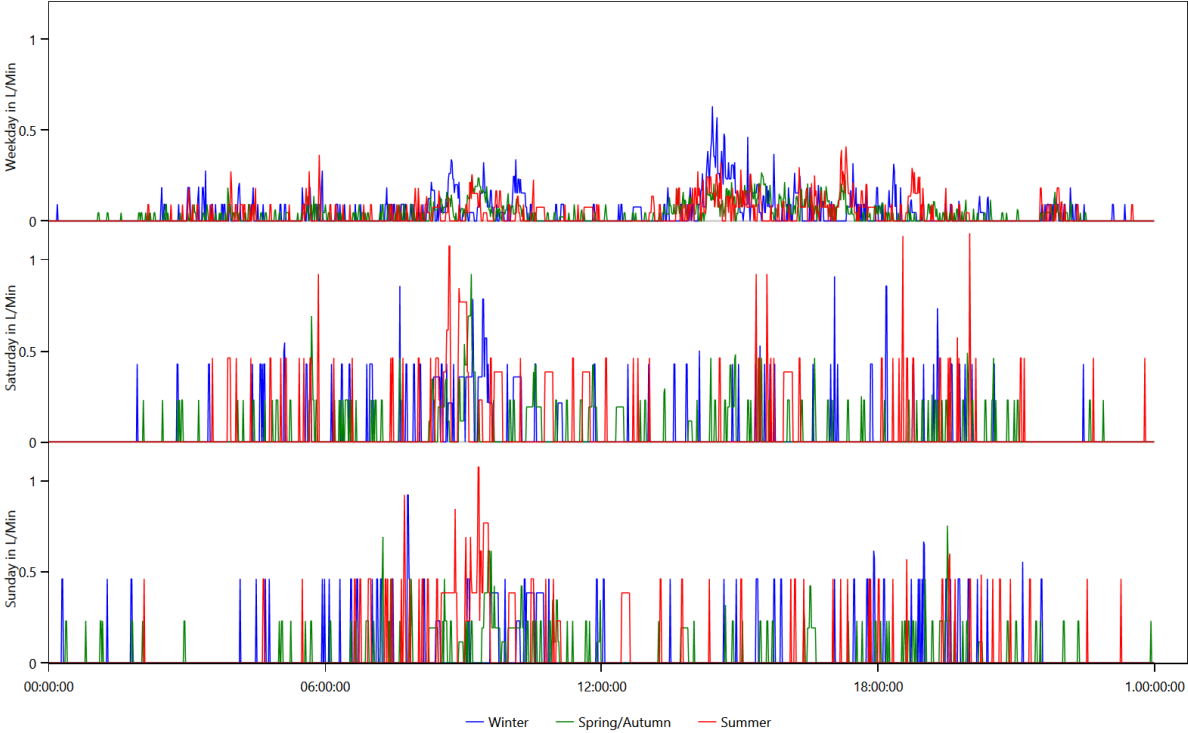
- Shower 5 L/min
- Bathroom Sink 5 L/Min
- Kitchen Sink (7.5L/min)

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

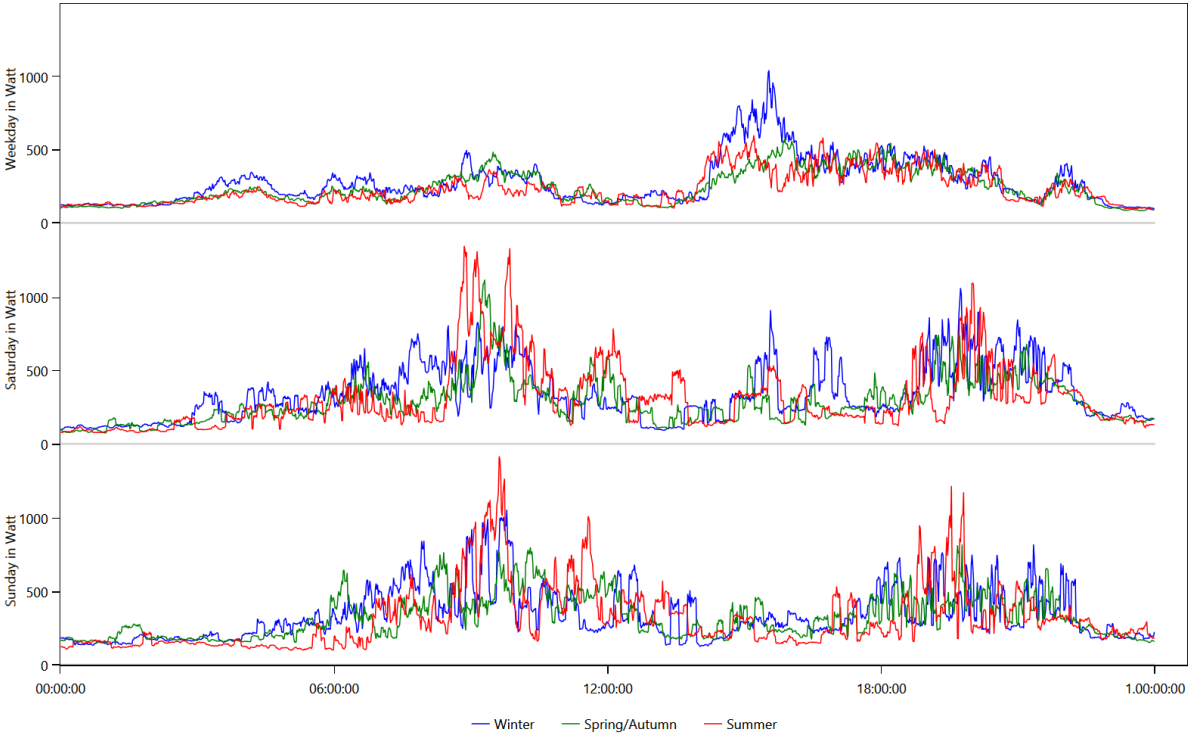
This is made from the files starting with: WeekdayProfiles

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

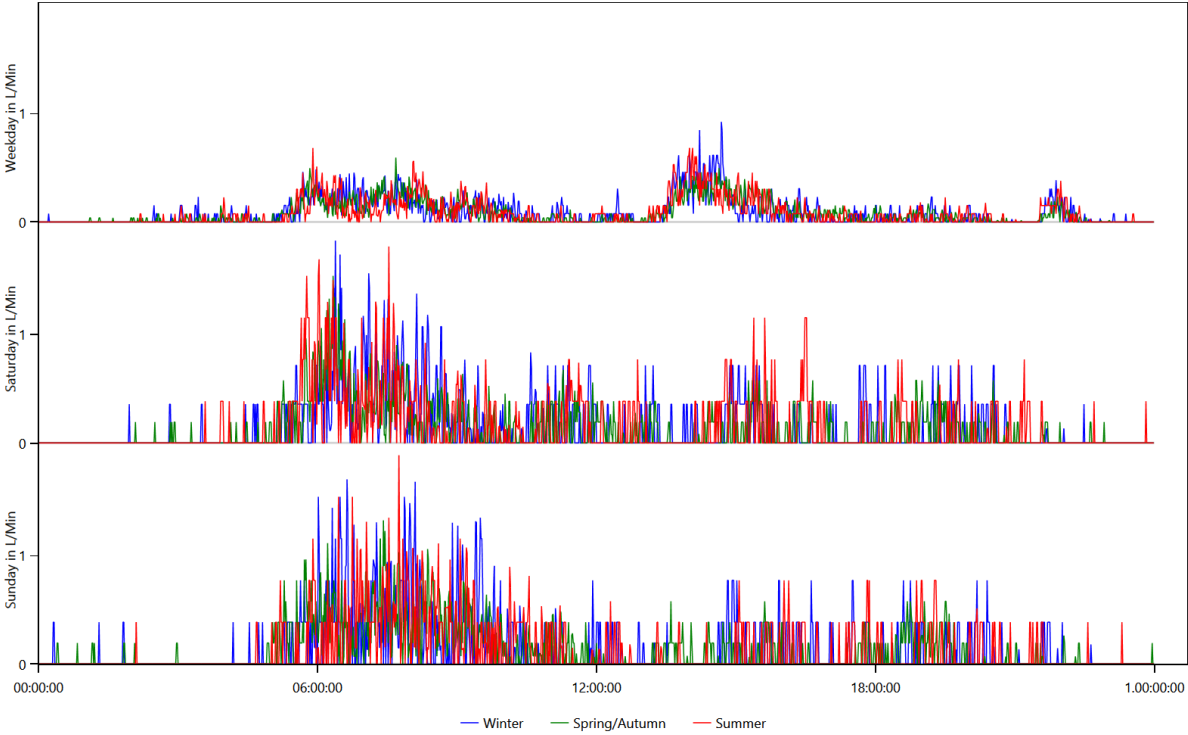
Cold Water



Electricity



Warm Water

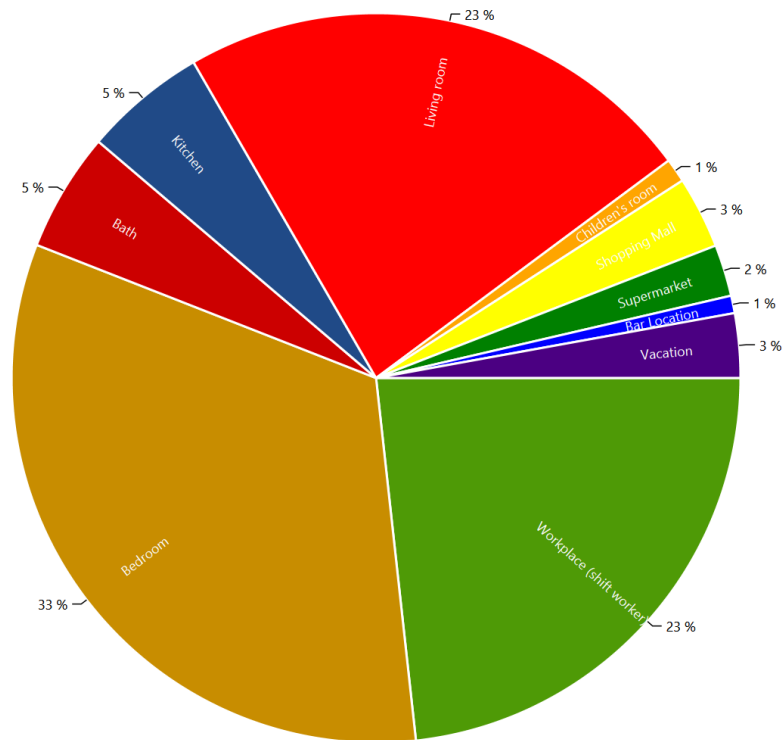


Location Distribution per Person

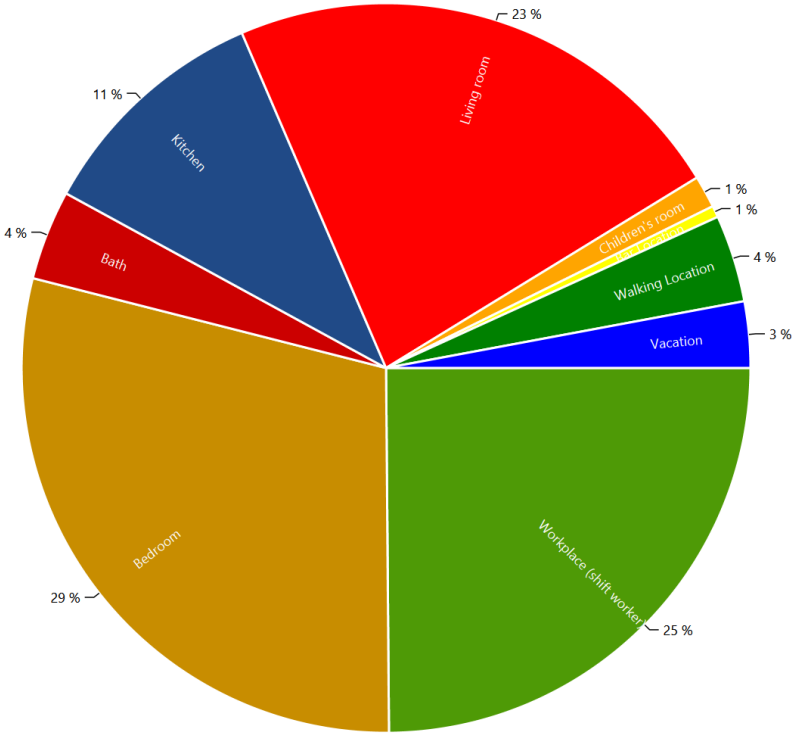
This is made from the files starting with: LocationStatistics

These charts show where the persons spend their time.

CHR21 Emily (36 Female)



CHR21 John (40 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

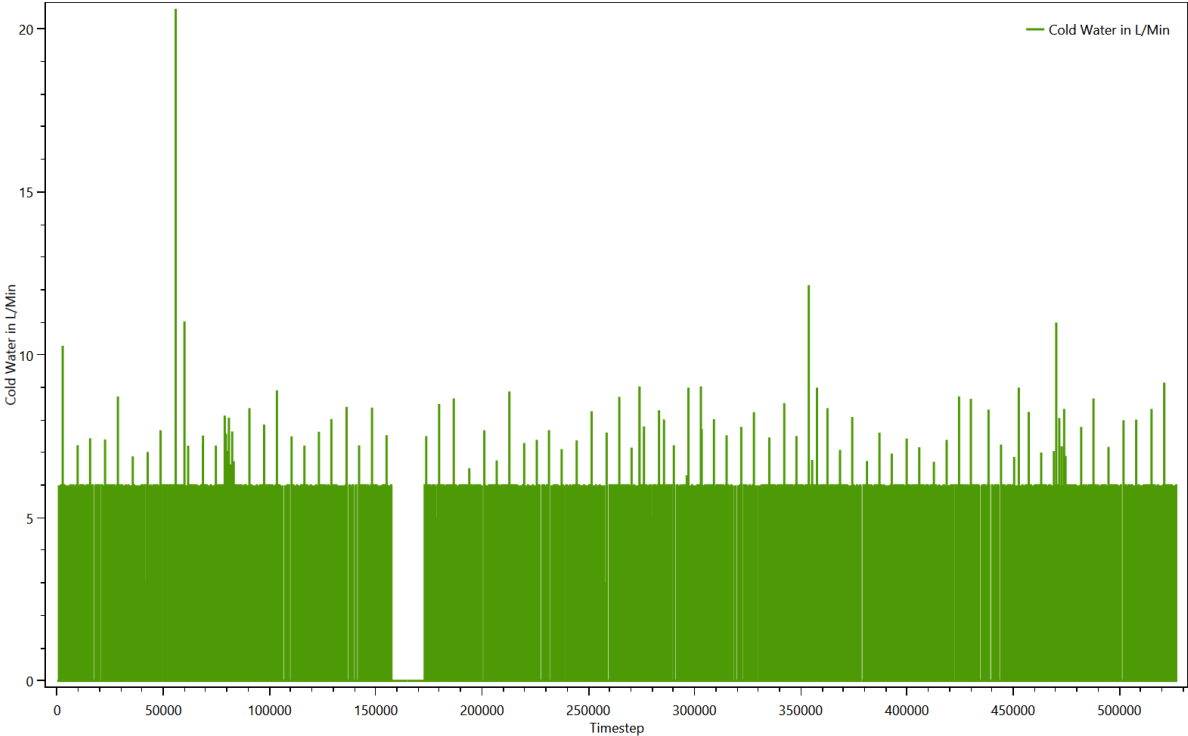
```
Time step;Calendertime;Person;Selected affordance;Affordance Category;Is Sick
0;01.01.2016 00:00;CHR21 Emily (36/Female);work as shift worker (woman);work;False;
0;01.01.2016 00:00;CHR21 John (40/Male);sleep bed 07 (08 h) (shift worker man);sleep;False;
272;01.01.2016 04:32;CHR21 John (40/Male);work as shift worker (man);work;False;
366;01.01.2016 06:06;CHR21 Emily (36/Female);sleep bed 06 (08 h) (shift worker woman);sleep;False;
813;01.01.2016 13:33;CHR21 John (40/Male);take a shower (men);hygiene;False;
832;01.01.2016 13:52;CHR21 John (40/Male);go to the toilet;hygiene;False;
837;01.01.2016 13:57;CHR21 John (40/Male);do laundry at 30°C (by variable);cleaning;False;
850;01.01.2016 14:10;CHR21 Emily (36/Female);take a shower with hair washing (women) (20 min hair
drying);hygiene;False;
854;01.01.2016 14:14;CHR21 John (40/Male);make frozen pizza and eat it;cooking;False;
884;01.01.2016 14:44;CHR21 John (40/Male);take a nap;sleep;False;
905;01.01.2016 15:05;CHR21 Emily (36/Female);make frozen pizza and eat it;cooking;False;
937;01.01.2016 15:37;CHR21 Emily (36/Female);go to the toilet;hygiene;False;
942;01.01.2016 15:42;CHR21 Emily (36/Female);take a nap;sleep;False;
951;01.01.2016 15:51;CHR21 John (40/Male);cuddle and sleep (take a nap);sleep;False;
1014;01.01.2016 16:54;CHR21 Emily (36/Female);play Playstation;Passive Entertainment (TV etc.);False;
1014;01.01.2016 16:54;CHR21 John (40/Male);hang up laundry outside;cleaning;False;
1043;01.01.2016 17:23;CHR21 John (40/Male);use the laptop (1.5 h);Active Entertainment (Computer, Internet
etc.);False;
1074;01.01.2016 17:54;CHR21 Emily (36/Female);play digital piano (1 h);Offline Entertainment;False;
1083;01.01.2016 18:03;CHR21 Emily (36/Female);watch TV series on weekdays 18:00;Passive Entertainment
(TV etc.);False;
```

Sum Profiles

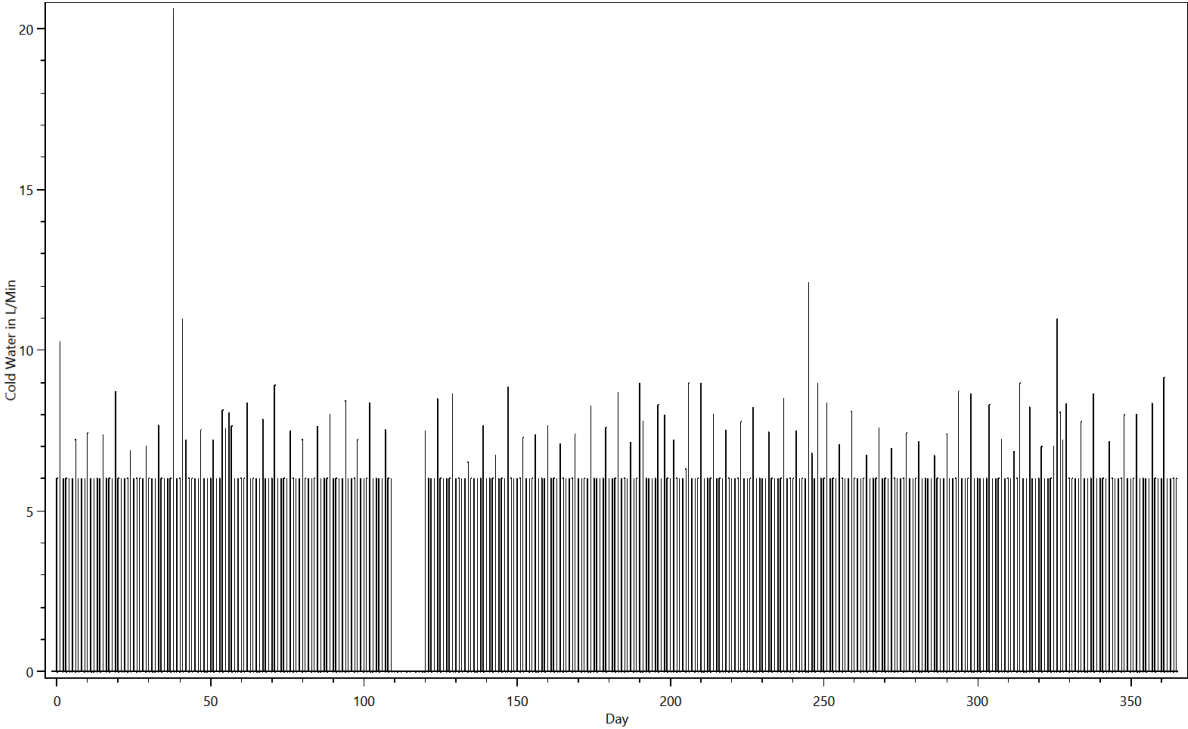
This is made from the files starting with: SumProfiles

This shows the energy use during the simulation.

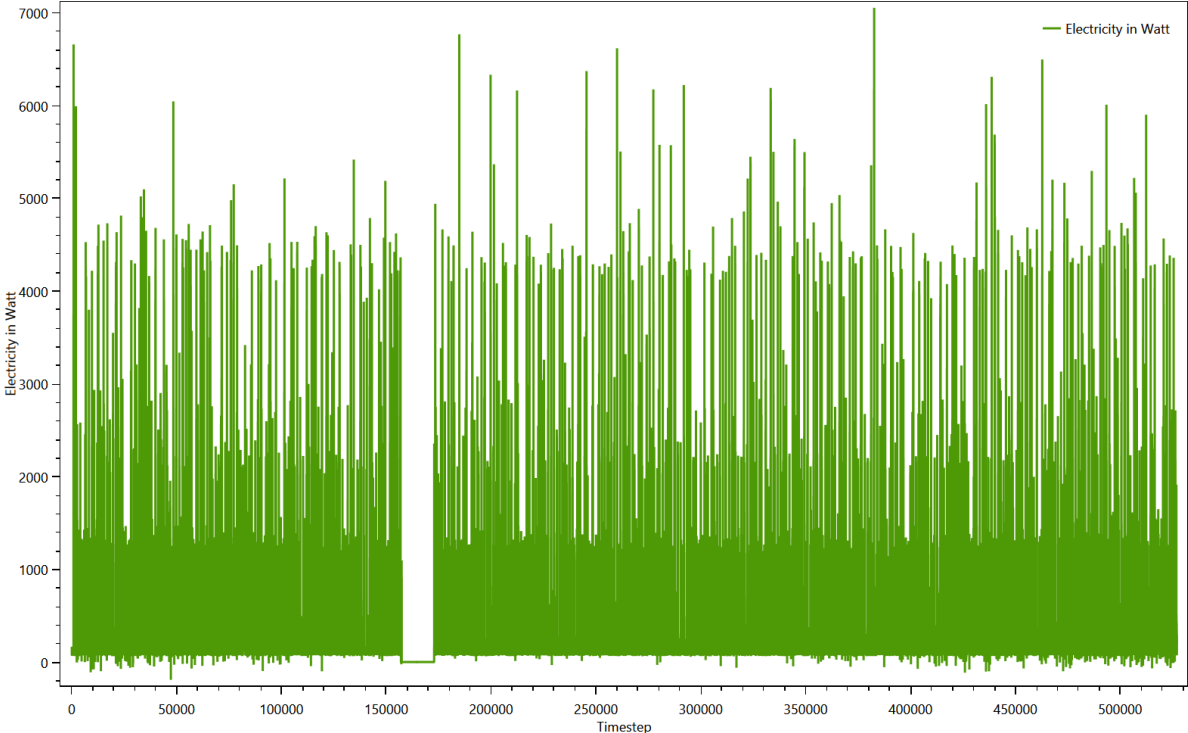
[Summed up curve for Cold Water from SumProfiles.Cold Water.png](#)



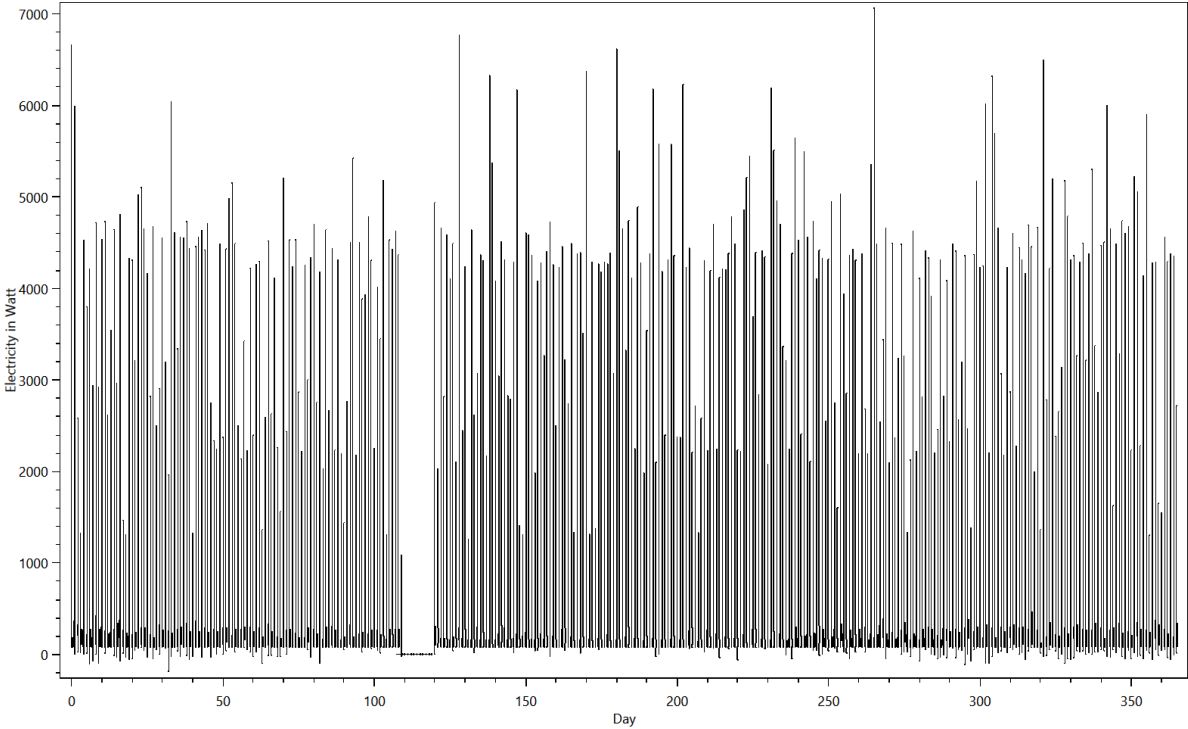
Summed up curve for Cold WaterMinMax from SumProfiles.Cold WaterMinMax.png



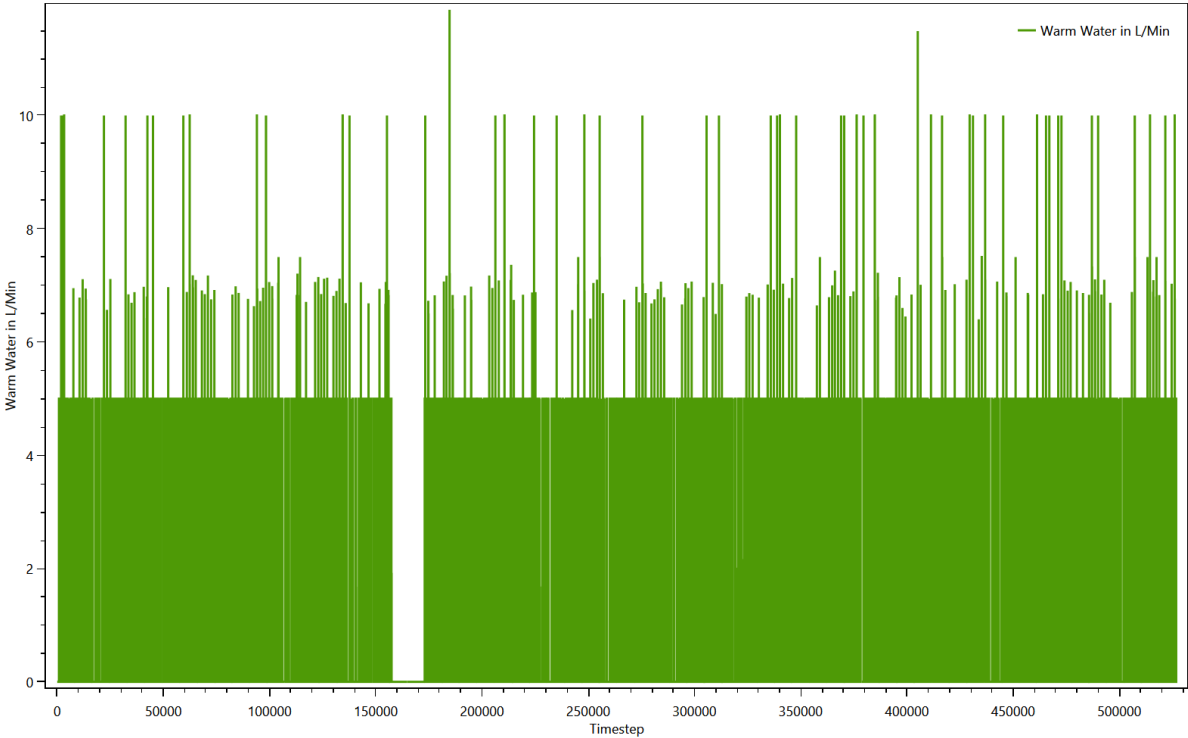
Summed up curve for Electricity from SumProfiles.Electricity.png



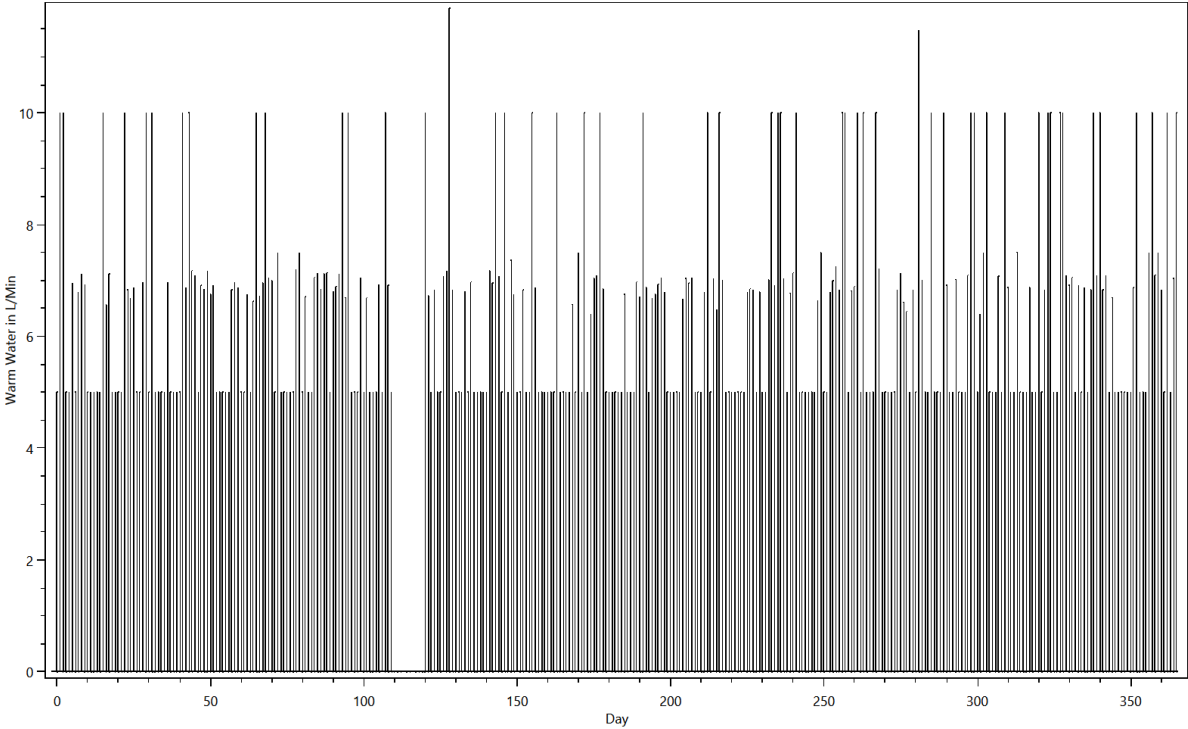
Summed up curve for ElectricityMinMax from SumProfiles.ElectricityMinMax..png



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.CHR21 Couple, 30 - 64 years, shift worker 0.txt

Device;Load Type;Profile;Number of Activations

Bar;None;04 h 0 min 100% [Synthetic];23

Bathroom Light (20W);Electricity;Bath - light [Synthetic for Light Device];790

Bathroom Mirror Light 100W (Conventional);Electricity;Bath - light [Synthetic for Light Device];790

Bathroom Sink 5 L/Min;Warm Water;0 h 01 min 100% [Synthetic];2391

Bathroom Sink 5 L/Min;Warm Water;0 h 01 min 50% [Synthetic];310

Bed 6 (shift worker woman);None;03 h 0 min 100 % [Synthetic];209

Bed 6 (shift worker woman);None;08 h 0 min 100% [Synthetic];311

Bed 7 (shift worker2);None;08 h 0 min 100% [Synthetic];321

Bedroom Light (60W);Electricity;Bedroom - light [Synthetic for Light Device];1

Book;None;01 h 0 min 100% [Synthetic];2

CD/DVD Player / Phillips HDR3810/31;Electricity;01 h 30 min 100% [Synthetic];141

CD/DVD Player / Phillips HDR3810/31;Electricity;02 h 0 min 100% [Synthetic];140

CD/DVD Player / Phillips HDR3810/31;Electricity;Standby TV / Receiver 1 h 0 min 3% [Synthetic];8509

Canon CanoScan LIDE 110;Electricity;0 h 10 min 100% [Synthetic];98

Children Room Light (100W);Electricity;Children's room - light [Synthetic for Light Device];113

Christopeit Treadmill TM 2 Pro;Electricity;0 h 30 min 100% [Synthetic];274

Cleanser;None;01 h 0 min 100% [Synthetic];94

Cloth Drying Rack;None;0 h 20 min 100% [Synthetic];140

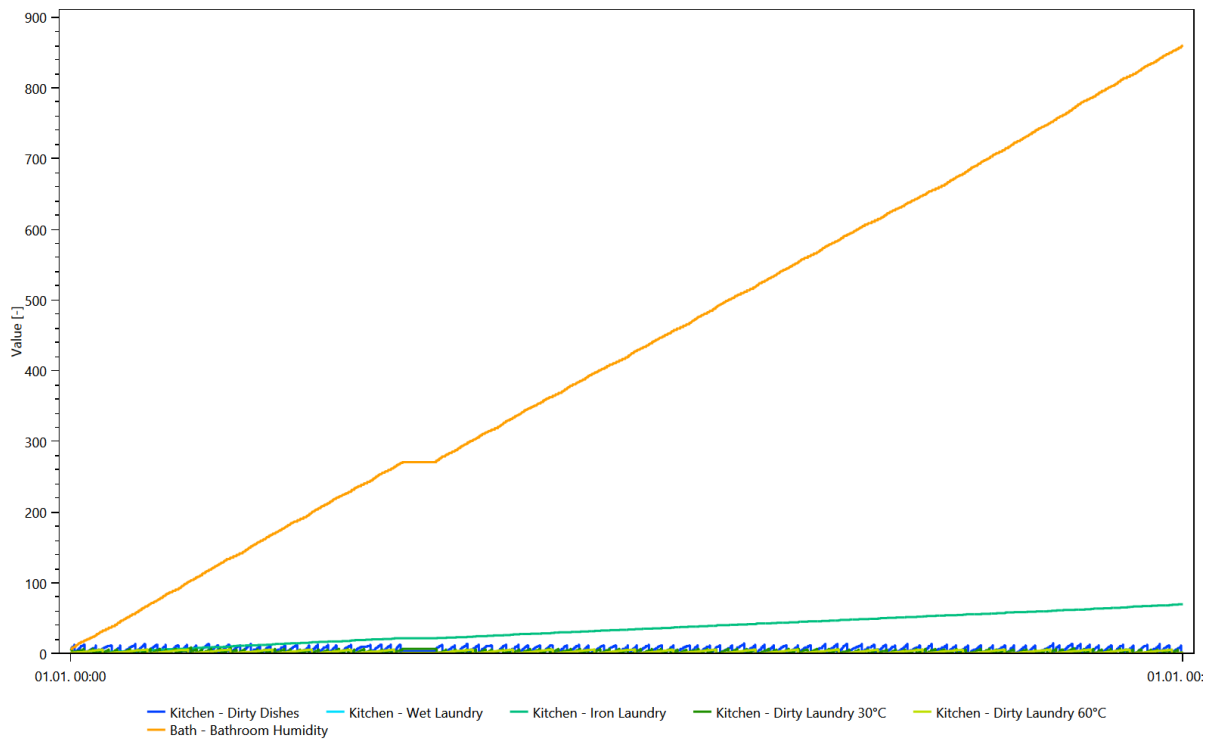
Couch;None;01 h 0 min 100% [Synthetic];534

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

