## Overview of the results of the household CHR44 Family with 2 children, 1 at work, 1 at home 0

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

Energy Intensity: Random

Seed 796

LoadProfileGenerator 5.8.0.16019

by Noah Pflugradt

http://www.loadprofilegenerator.de

Rendering date:16.12.2016 09:33:40

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## Totals

### **Totals for each Loadtype**

Load Type	Value	Unit
Cold Water	43193.30	L
Electricity	4224.73	kWh
Warm Water	243209.07	L

## **Totals for each Loadtype per Day**

Load Type	Value	Unit
Cold Water	118.01	L
Electricity	11.54	kWh
Warm Water	664.51	L

### Minimum and Maximum for each Loadtype

Household	Minimum	Maximum	Unit
Cold Water	0.00	14.96	L/Min
Electricity	-1.59	12520.62	Watt
Warm Water	0.00	29.25	L/Min

## **Totals for each Loadtype per Person**

Load Type	Value	Unit
Cold Water	10798.32	L
Electricity	1056.18	kWh

Warm Water	60802.27	L
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## Totals for each Loadtype per Person per Day

Load Type	Value	Unit
Cold Water	29.50	L
Electricity	2.89	kWh
Warm Water	166.13	L

## Persons

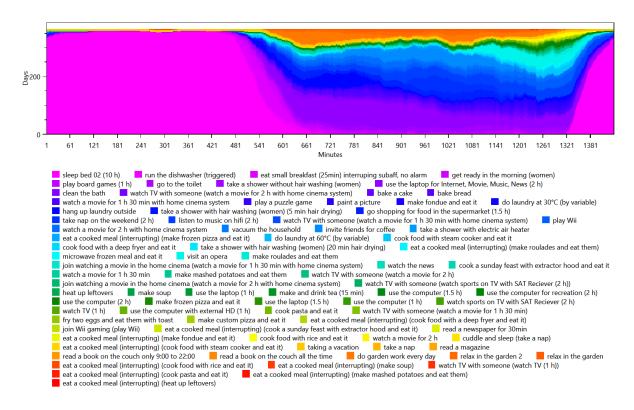
#### HH0 •

- CHR44 Barbara (43/Female)(43/Female) CHR44 Christopher (16/Male)(16/Male) 0
- 0
- CHR44 Rainer (45/Male)(45/Male) 0
- CHR44 Sandy (14/Female)(14/Female)

# **Activity Frequency Charts**

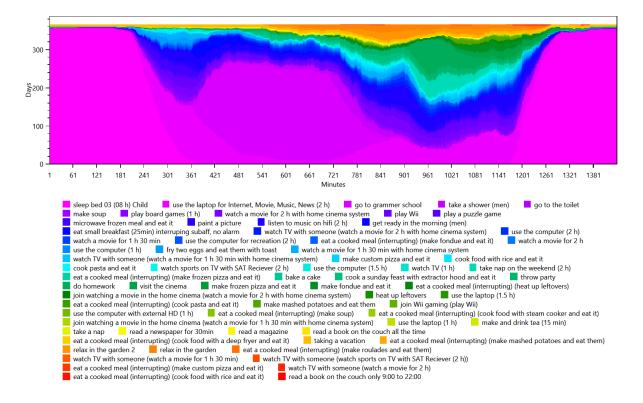
#### This is made from the files starting with: ActivityFrequenciesPerMinute

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.

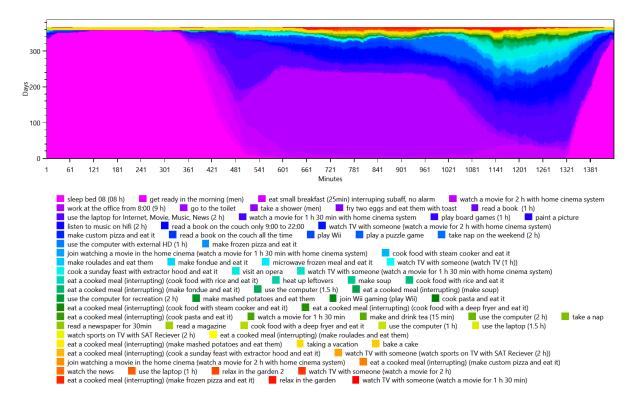


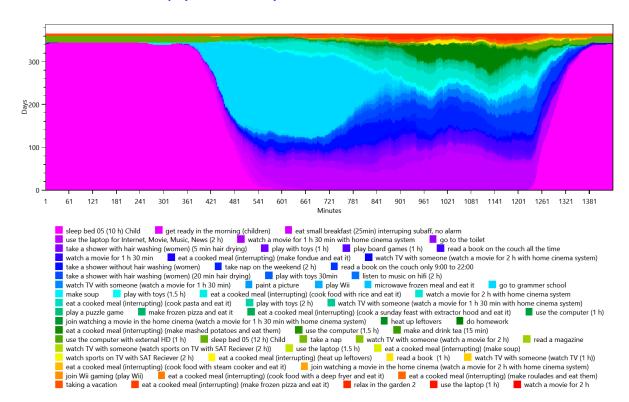
#### HH0 - CHR44 Barbara (43 Female)

#### HH0 - CHR44 Christopher (16 Male)



#### HH0 - CHR44 Rainer (45 Male)





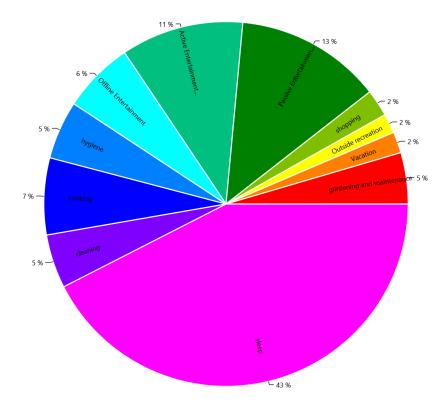
#### HH0 - CHR44 Sandy (14 Female)

# **Activity Distribution per Person**

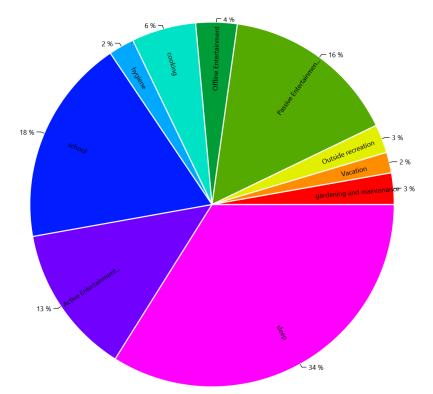
#### This is made from the files starting with: ActivityPercentage

This shows the distribution of the activities, grouped by the affordance Affordance ToCategories.

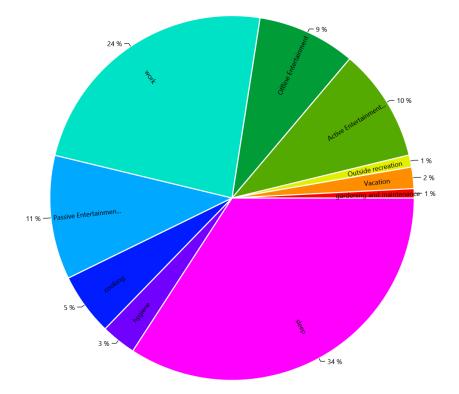
#### HH0 - CHR44 Barbara (43 Female)



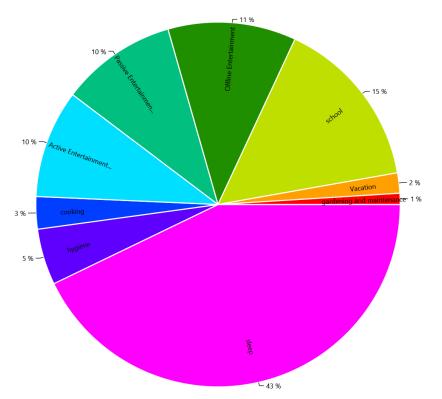
### HH0 - CHR44 Christopher (16 Male)



HH0 - CHR44 Rainer (45 Male)



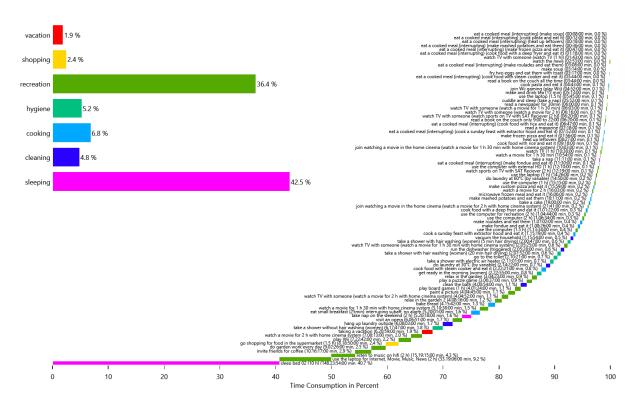




## Time Use per Person per Affordance Per Person

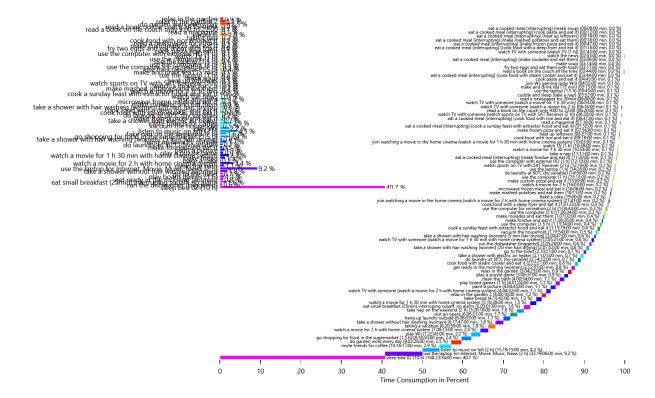
#### This is made from the files starting with: AffordanceTimeUse

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.

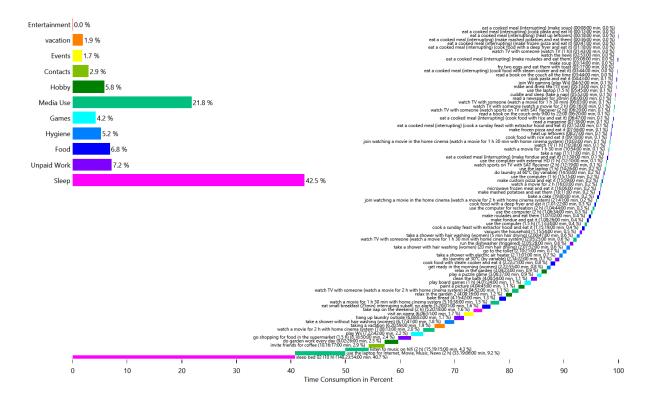


#### HH0 - CHR44 Barbara (43 Female)

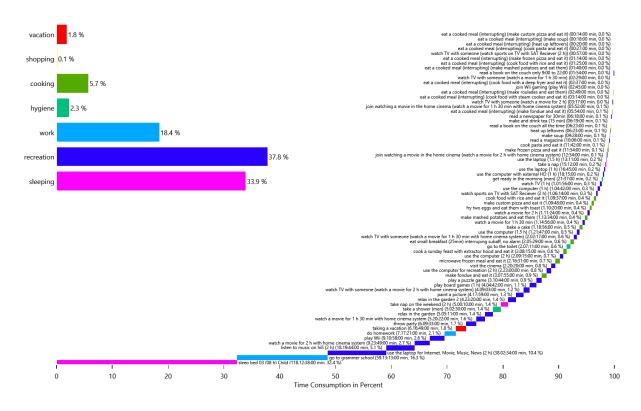
#### HH0 - CHR44 Barbara (43 Female)



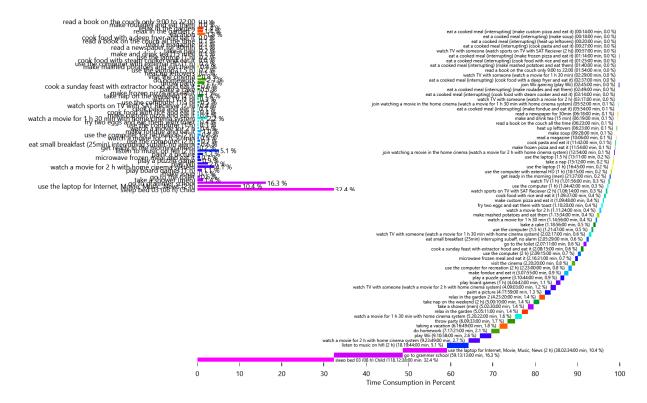
#### HH0 - CHR44 Barbara (43 Female)



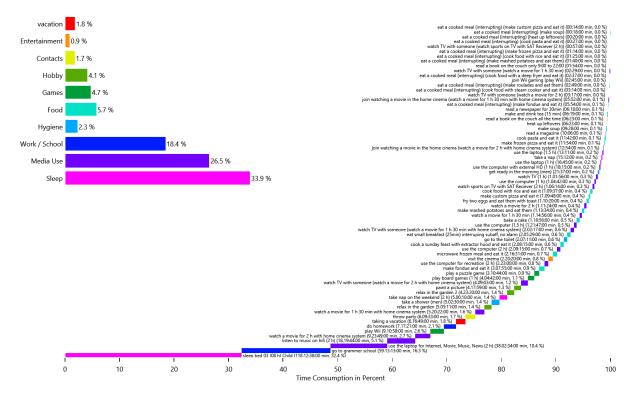
#### HH0 - CHR44 Christopher (16 Male)



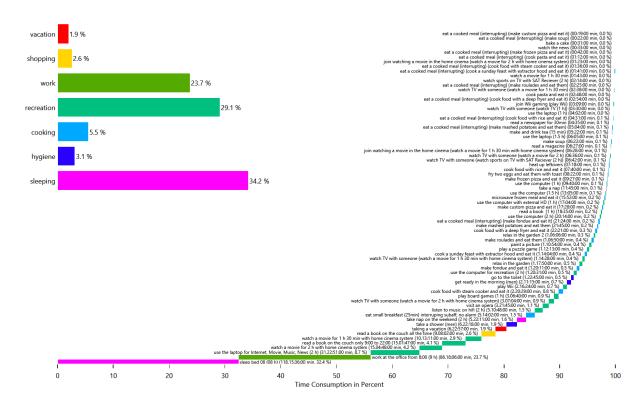
#### HH0 - CHR44 Christopher (16 Male)



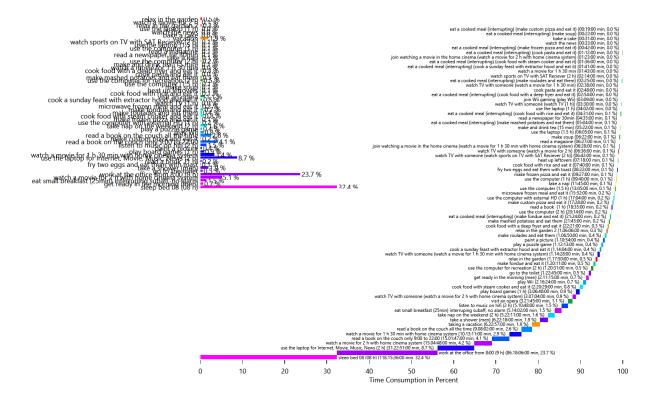




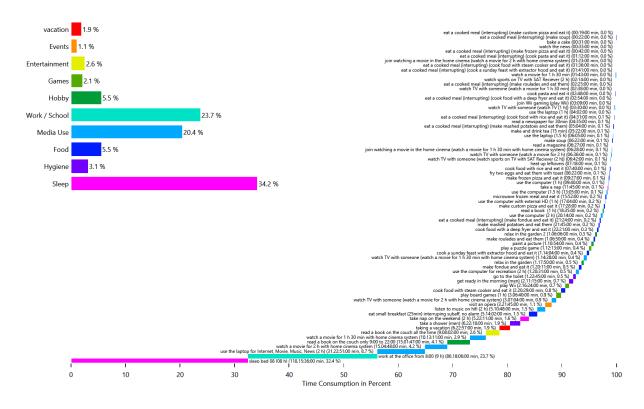
#### HH0 - CHR44 Rainer (45 Male)



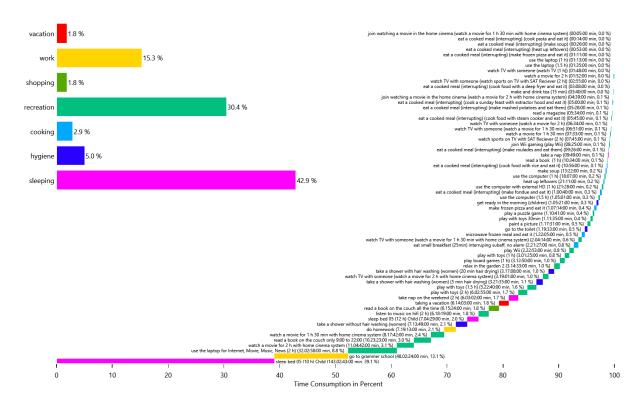
#### HH0 - CHR44 Rainer (45 Male)



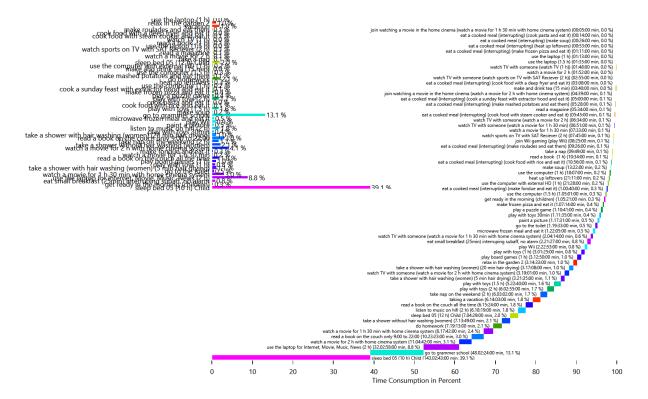
#### HH0 - CHR44 Rainer (45 Male)



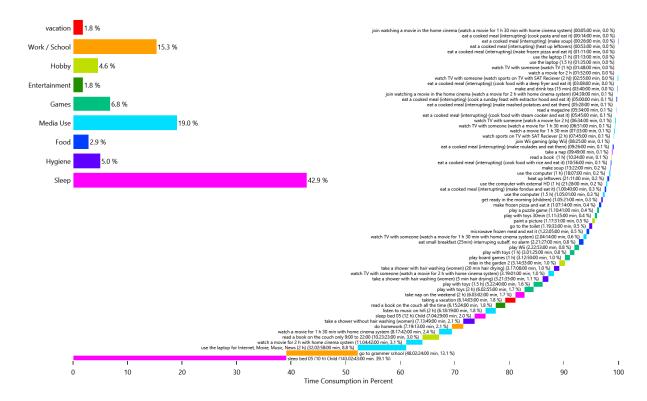
#### HH0 - CHR44 Sandy (14 Female)



#### HH0 - CHR44 Sandy (14 Female)



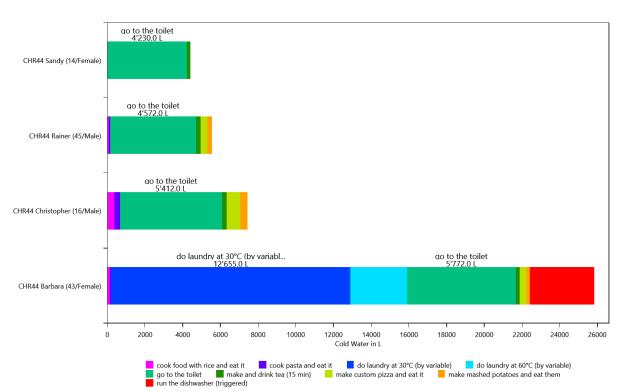
#### HH0 - CHR44 Sandy (14 Female)



## Energy use per person per affordance

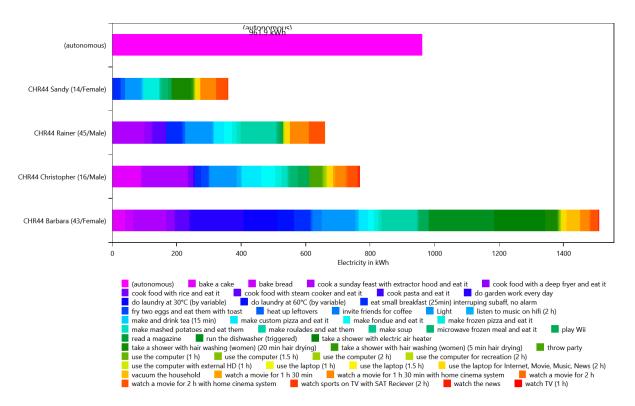
#### This is made from the files starting with: AffordanceEnergyUsePerPerson

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.

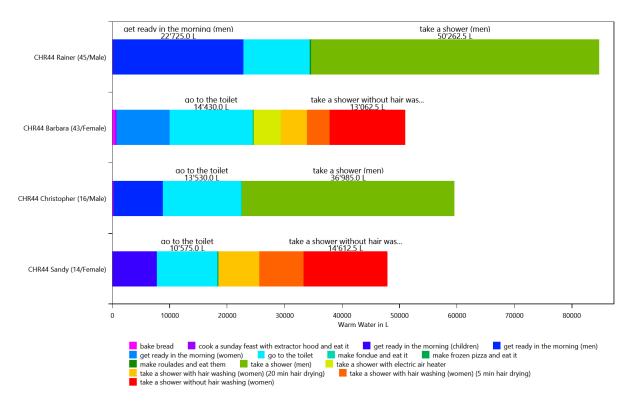


#### HH0 - Cold Water

#### HH0 - Electricity



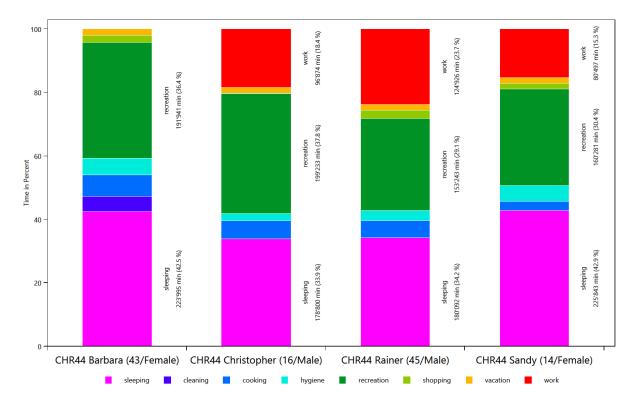
#### HH0 - Warm Water



# Time Use per Person Per Affordance according to different category definitions

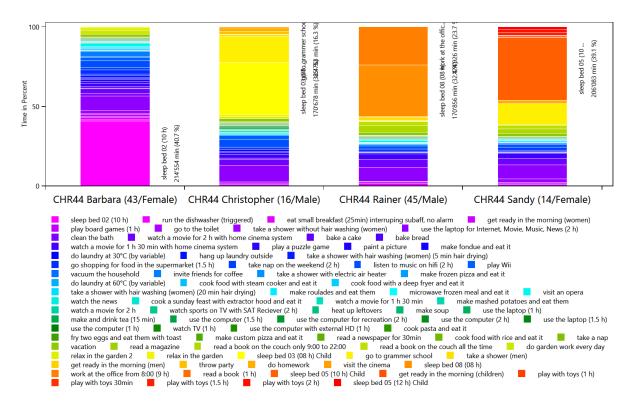
#### This is made from the files starting with: AffordanceTaggingSet

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.

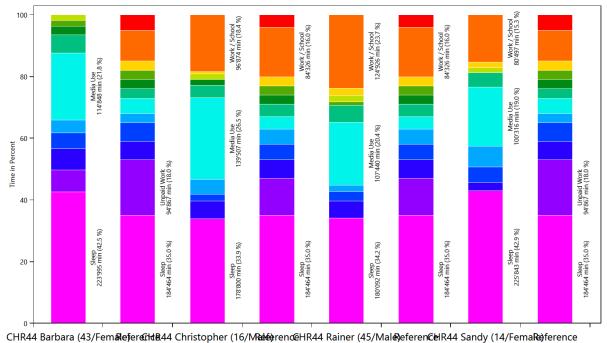


#### Basic Tagging - HH0





#### Wo bleibt die Zeit - HHO

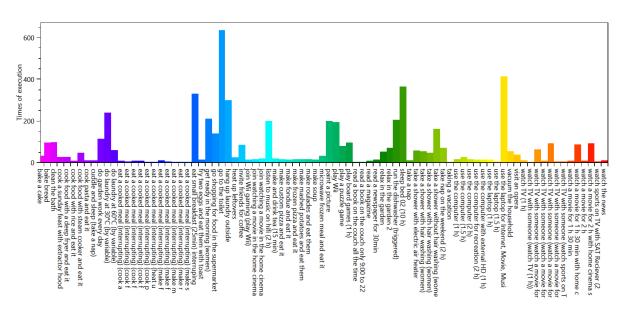


Sleep Unpaid Work Food Hygiene Games Hedia Use Hobby Contacts Events vacation Entertainment Work / School Sport

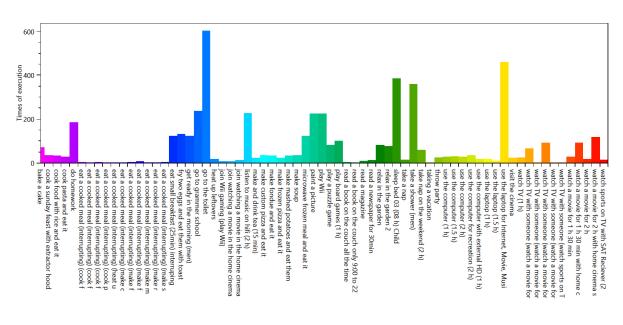
# Overview of the actions of each member of the household

#### This is made from the files starting with: ExecutedActionsOverviewCount

These charts show how often each affordance was executed.

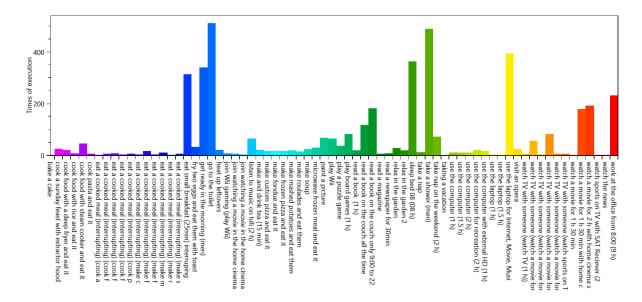


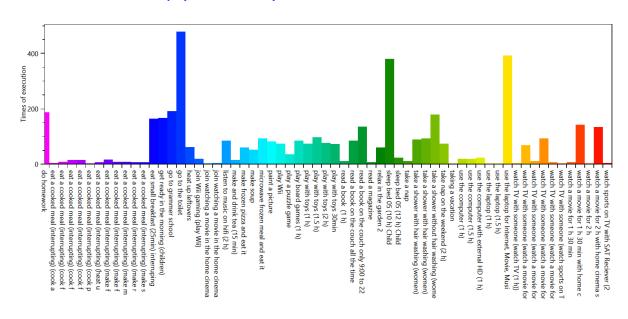
#### HH0 - CHR44 Barbara (43 Female)



#### HH0 - CHR44 Christopher (16 Male)

#### HH0 - CHR44 Rainer (45 Male)





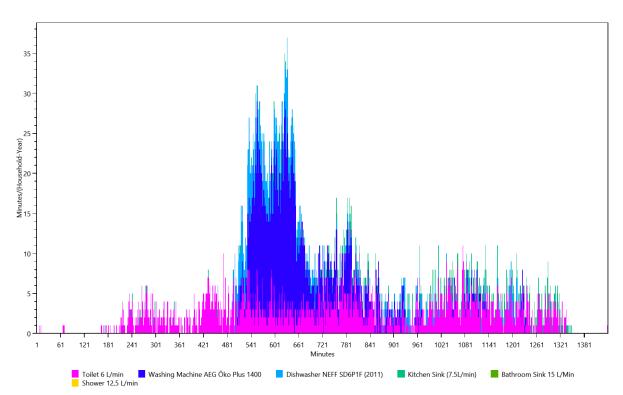
#### HH0 - CHR44 Sandy (14 Female)

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

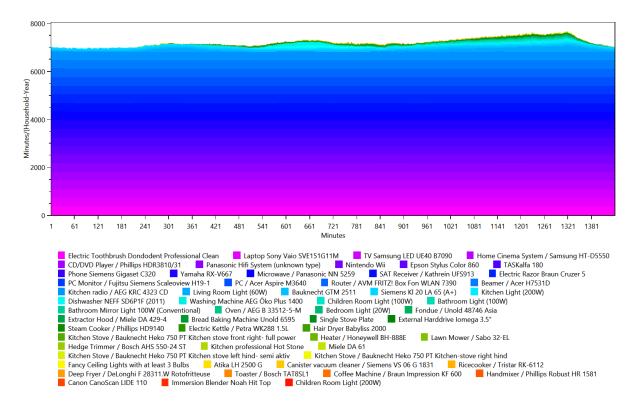
#### This is made from the files starting with: TimeOfUseEnergyProfiles

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

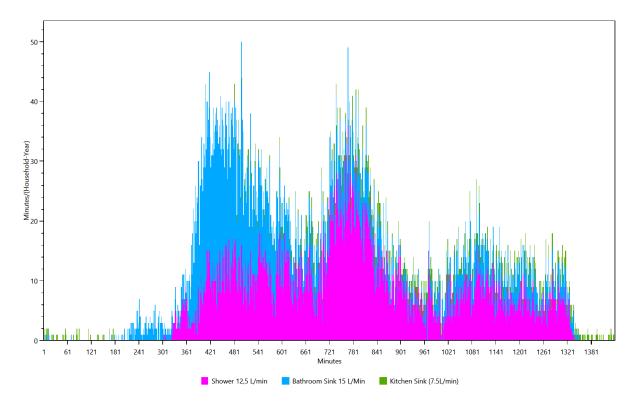
#### Cold Water



#### Electricity



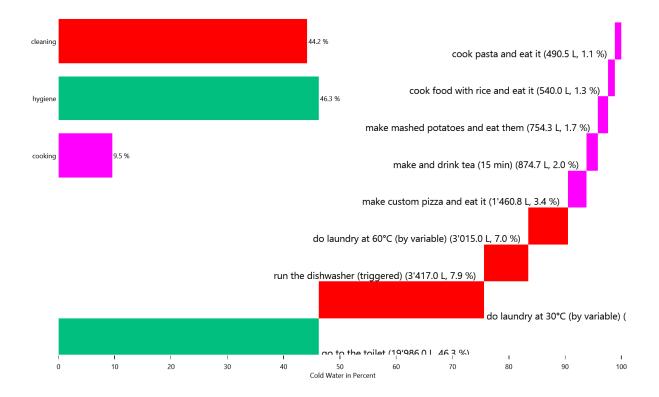
Warm Water



# Energy/Resource use distribution per load type per affordance

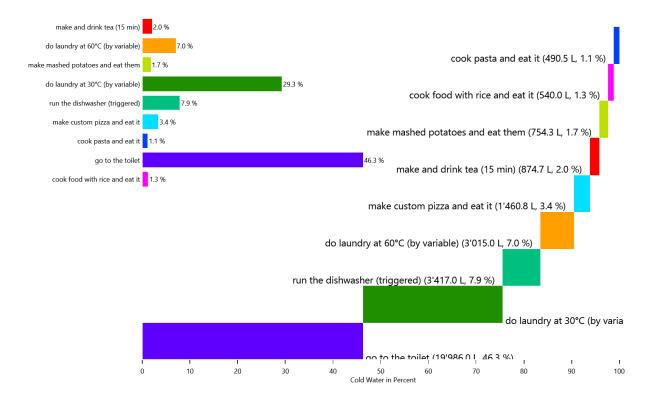
#### This is made from the files starting with: AffordanceEnergyUse

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

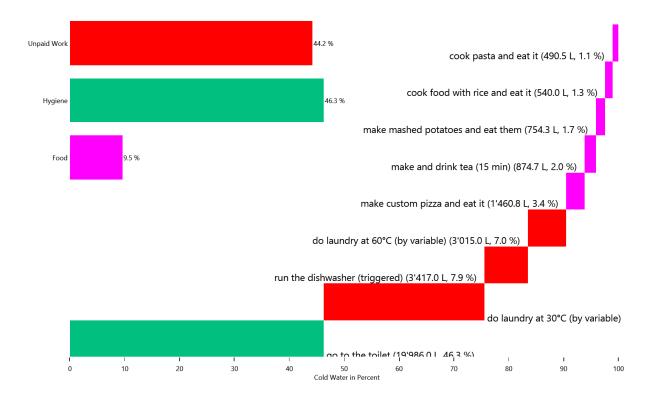


#### HH0 - Cold Water

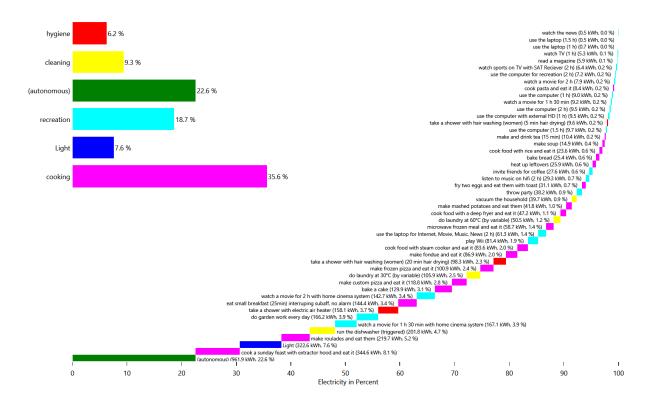
#### HH0 - Cold Water



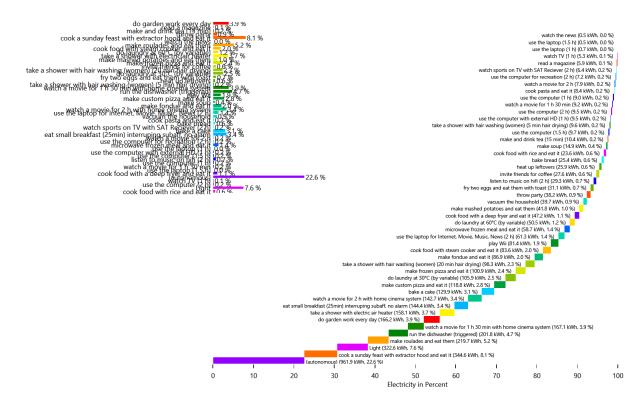




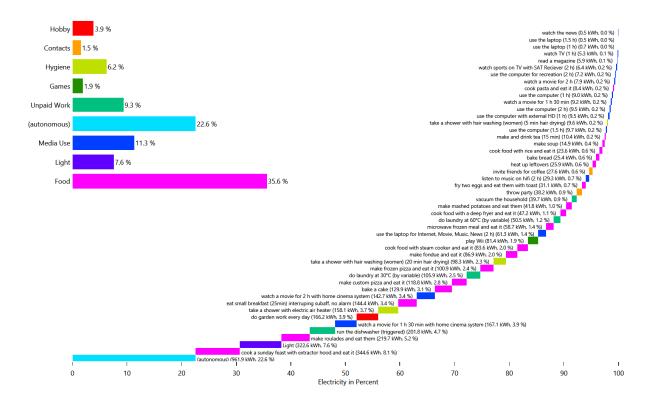
#### HH0 - Electricity



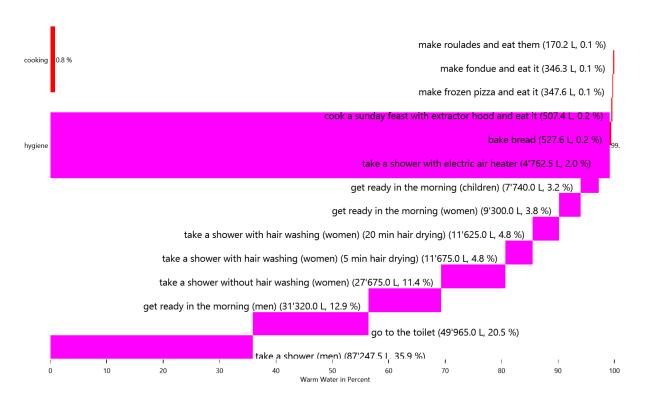
#### HH0 - Electricity



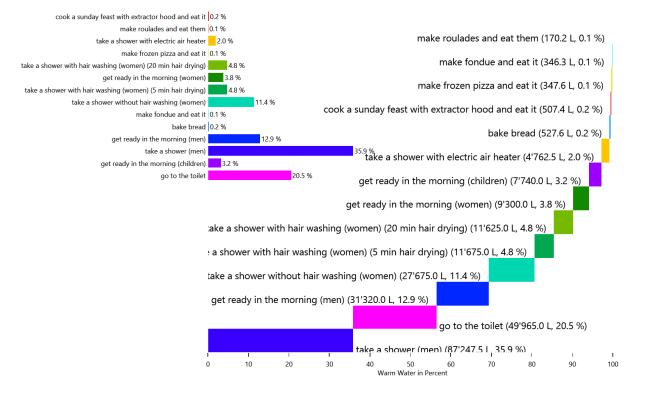
#### HH0 - Electricity



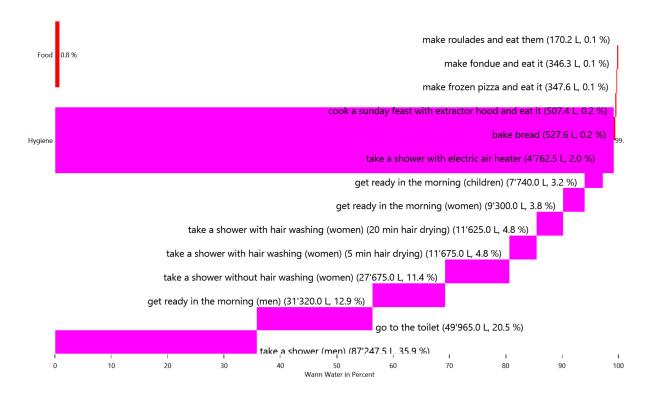




#### HH0 - Warm Water





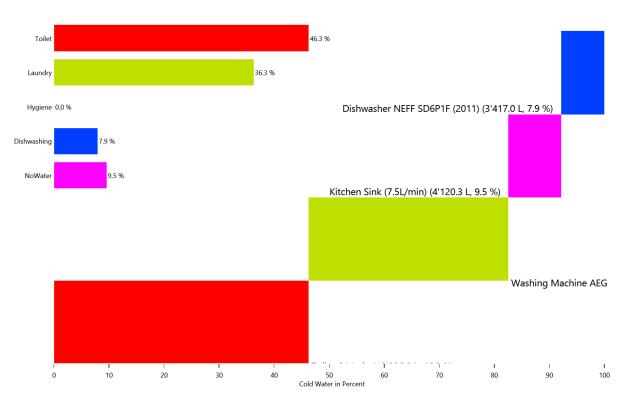


# Energy use for each load type for each device

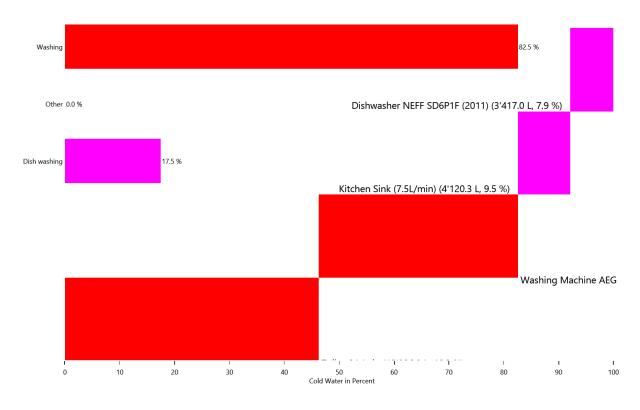
#### This is made from the files starting with: DeviceSums

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

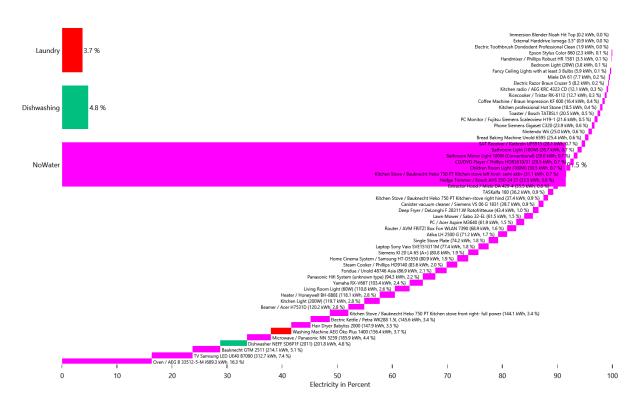
#### Cold Water



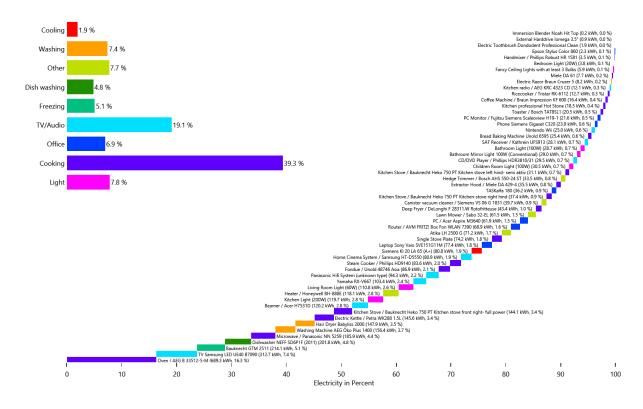
Cold Water



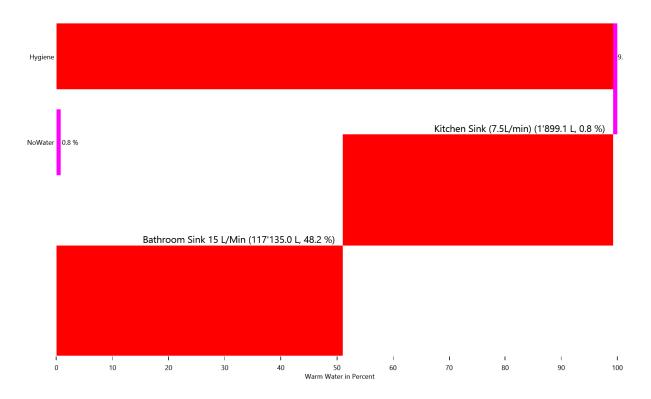
Electricity



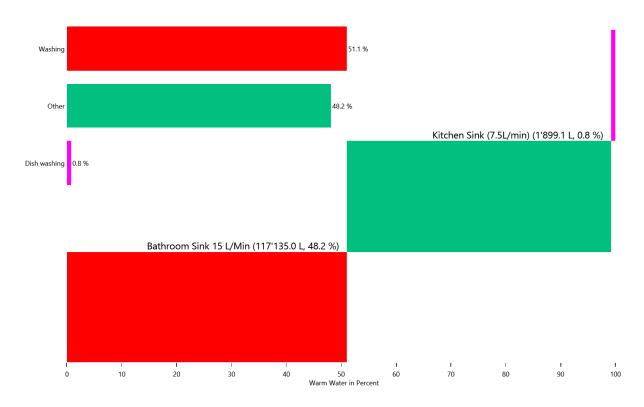
#### Electricity



#### Warm Water



#### Warm Water

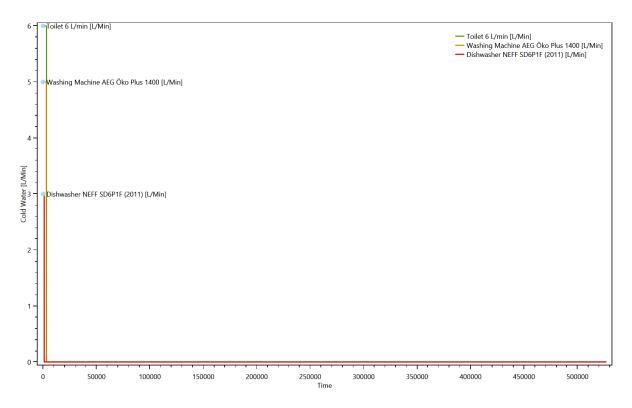


### Duration curve for each device for each load type

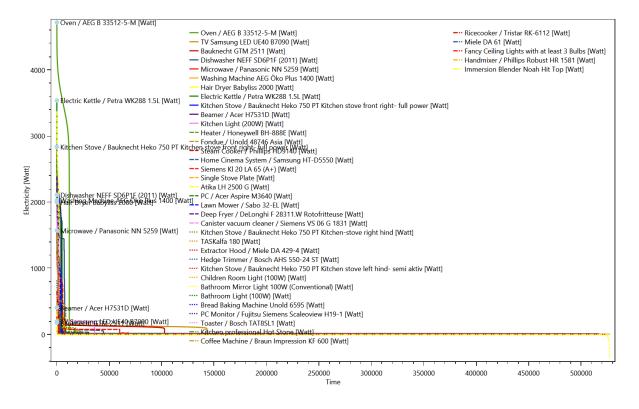
#### This is made from the files starting with: DeviceDurationCurves

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

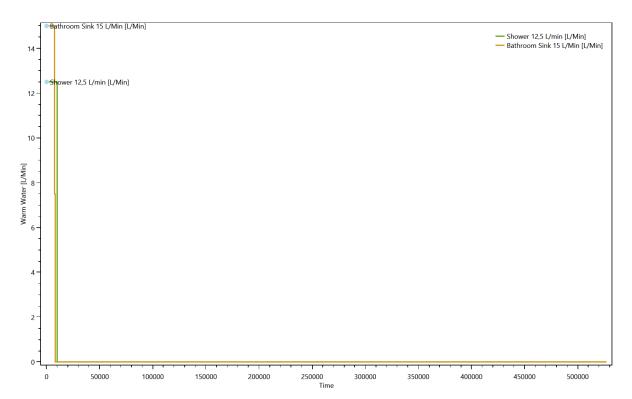
#### Cold Water



#### Electricity



#### Warm Water

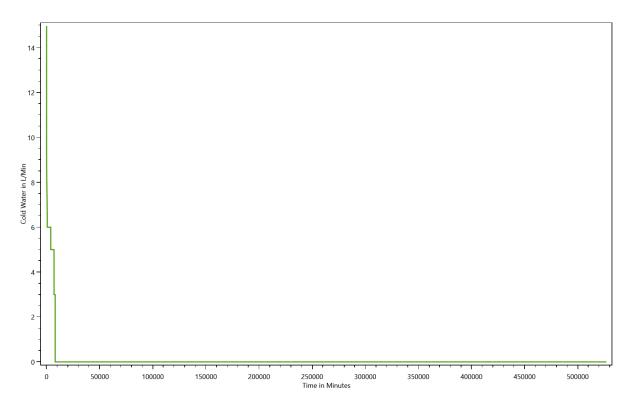


## **Duration curve for each load type**

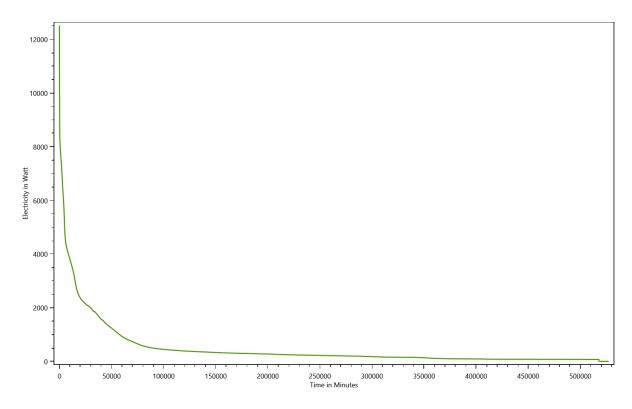
#### This is made from the files starting with: DurationCurve

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

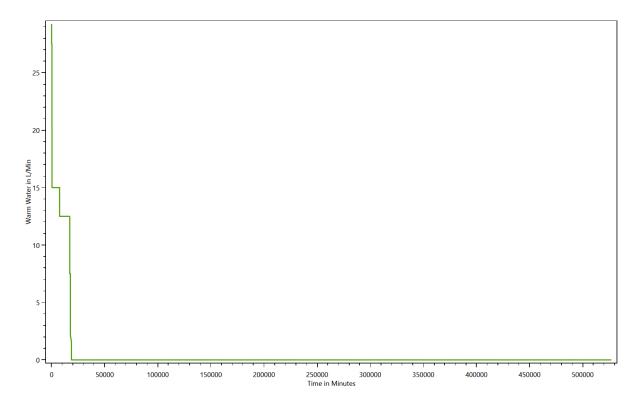
#### Cold Water



### Electricity



#### Warm Water

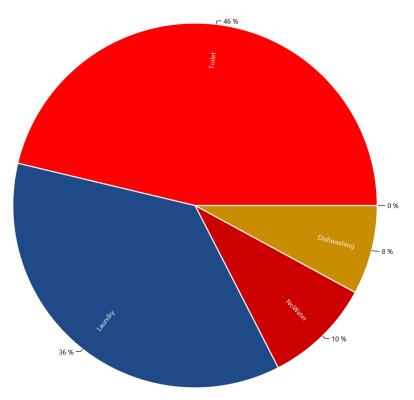


# Grouped energy use for each load type for each device

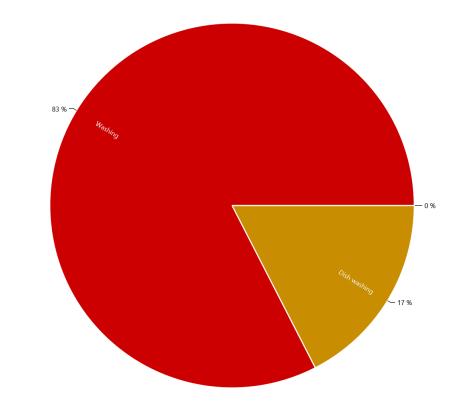
#### This is made from the files starting with: DeviceTaggingSet

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

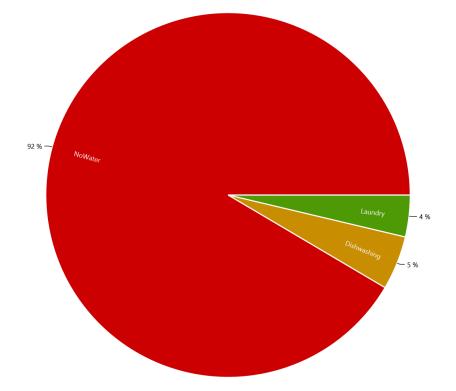
HH0 - Destatis Water Usage Statistics - Cold Water

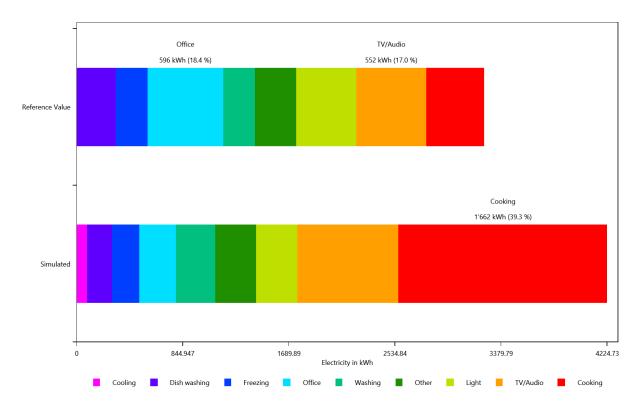


#### HH0 - Energieagentur - Cold Water



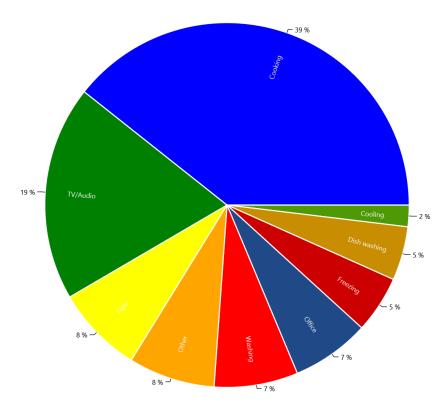
HH0 - Destatis Water Usage Statistics - Electricity

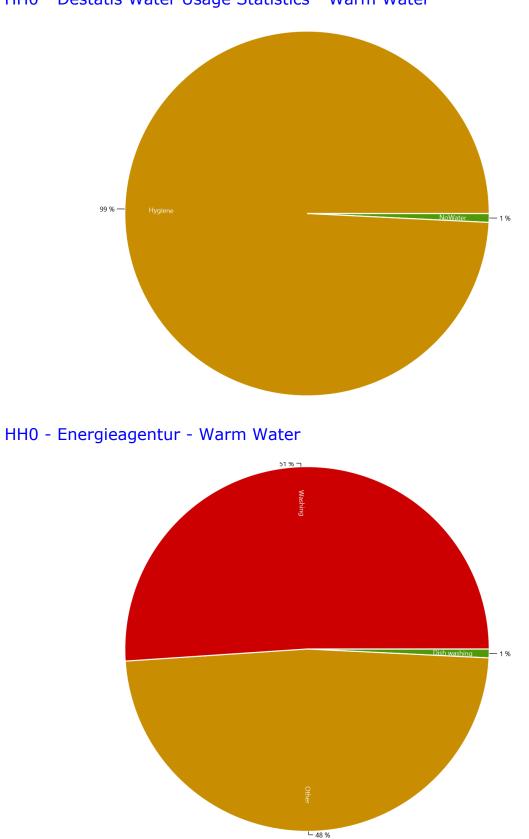




#### HH0 - Energieagentur - Electricity

HH0 - Energieagentur - Electricity





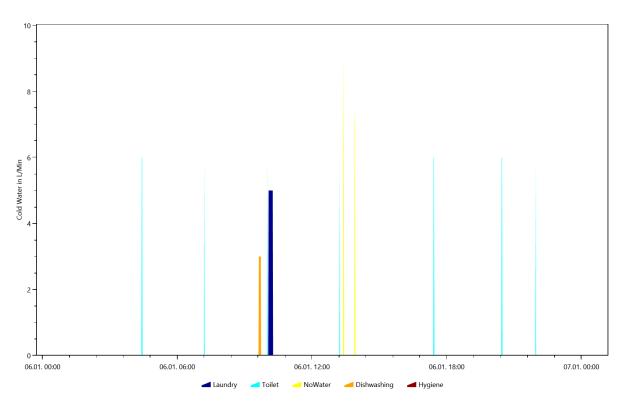
HH0 - Destatis Water Usage Statistics - Warm Water

### Example of the device profiles for each load type

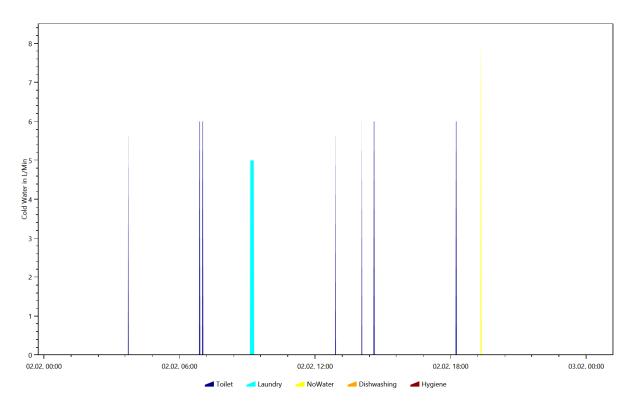
#### This is made from the files starting with: DeviceProfiles

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

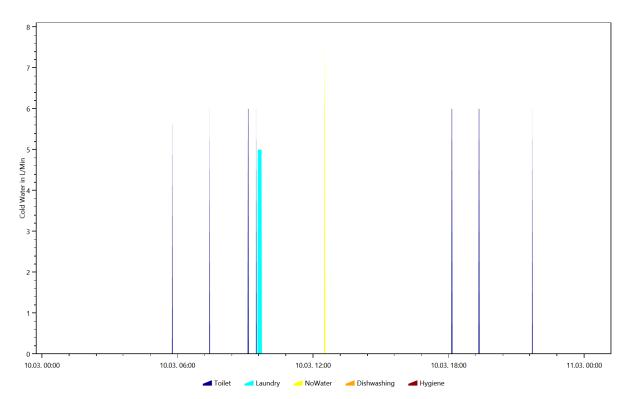
# Cold Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.1.6



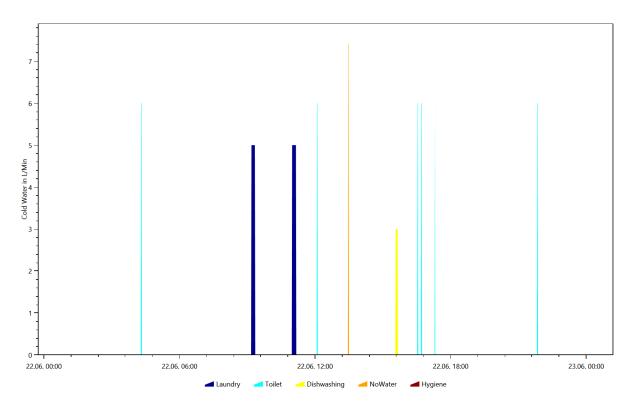
# Cold Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.2.2



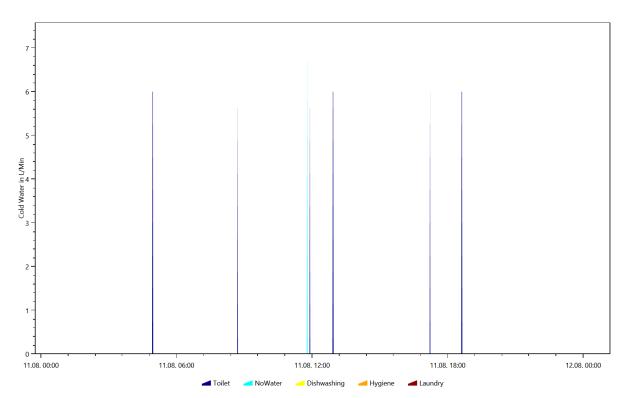
Cold Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.3.10

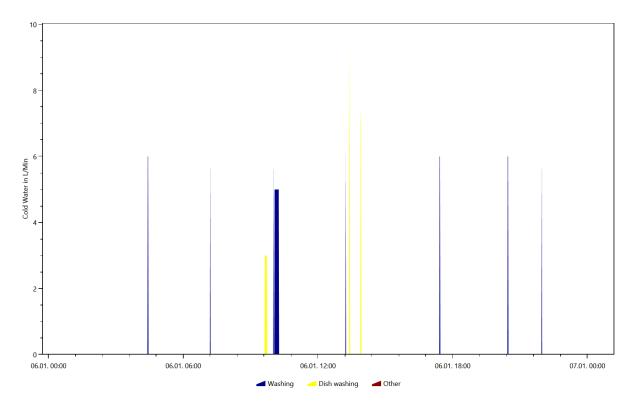


# Cold Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.6.22



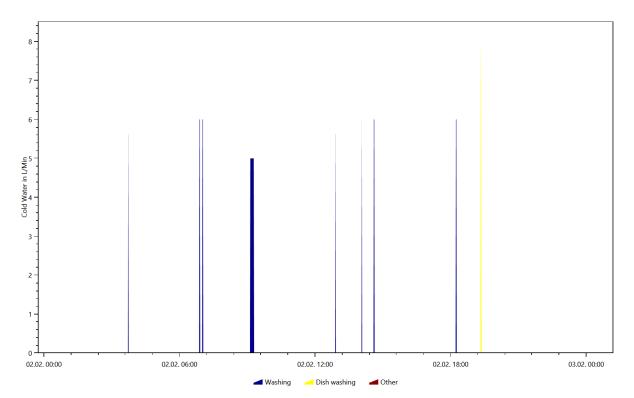
Cold Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.8.11

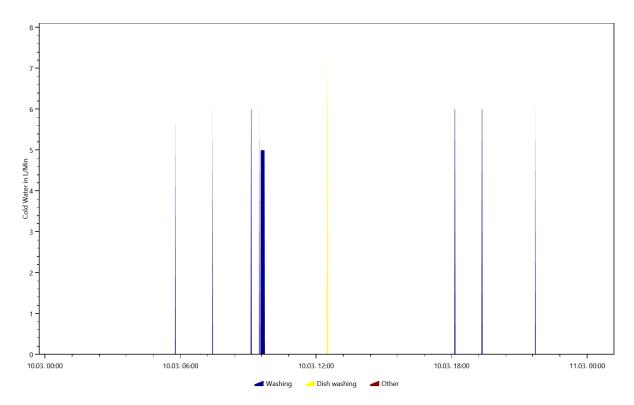




Cold Water, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.1.6

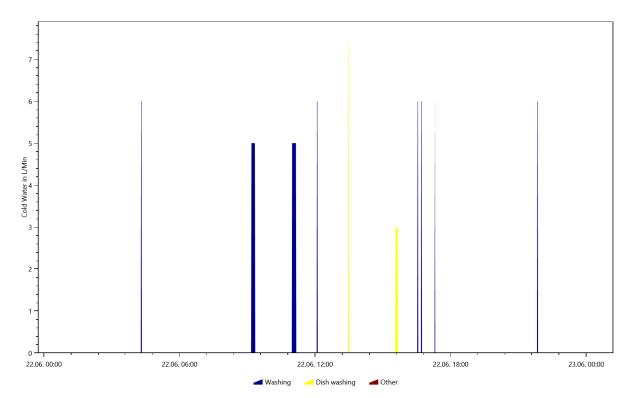
Cold Water, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.2.2



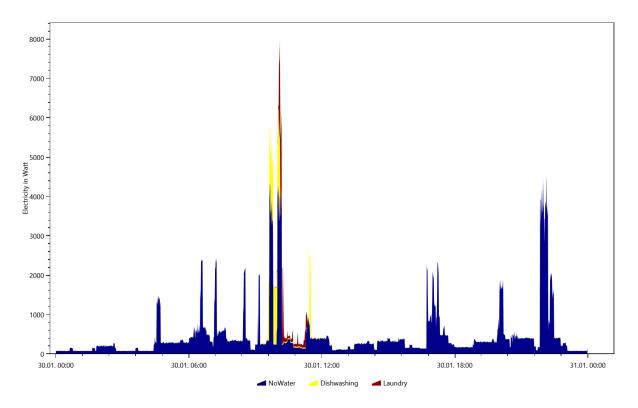


Cold Water, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.3.10

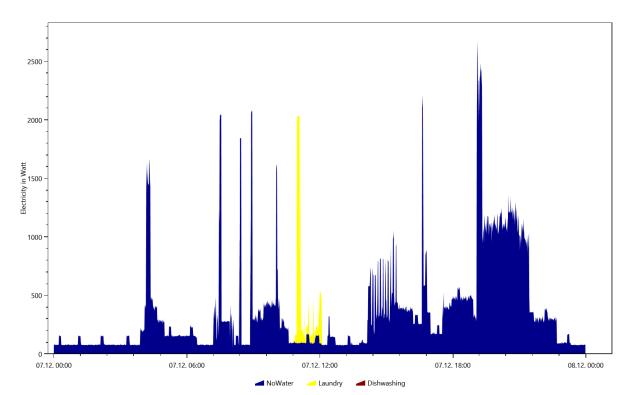
Cold Water, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.6.22



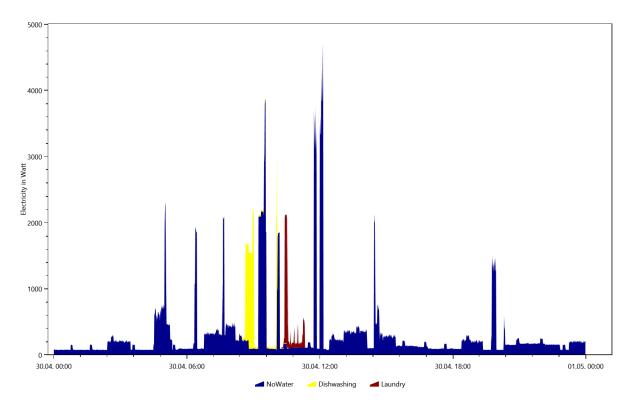
# Electricity, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.1.30



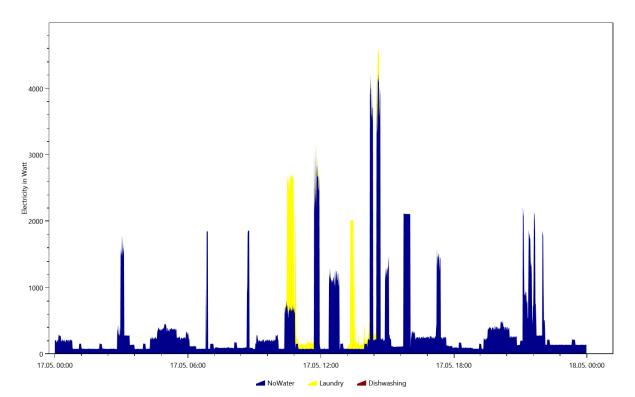
Electricity, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.12.7



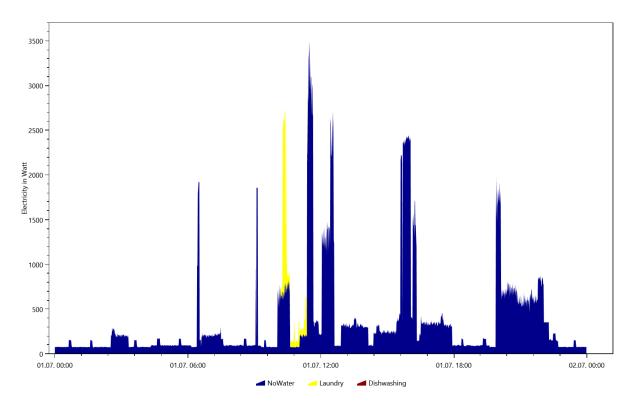
# Electricity, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.4.30



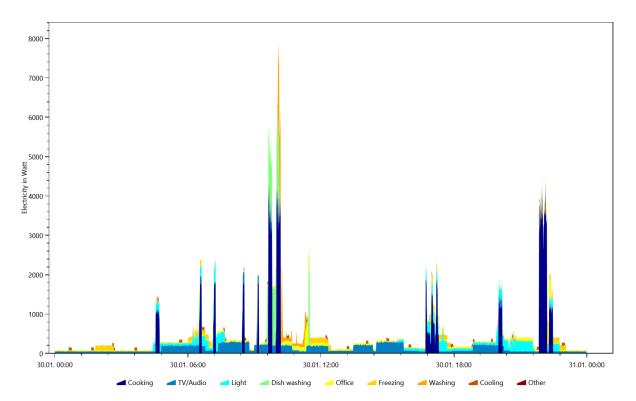
Electricity, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.5.17

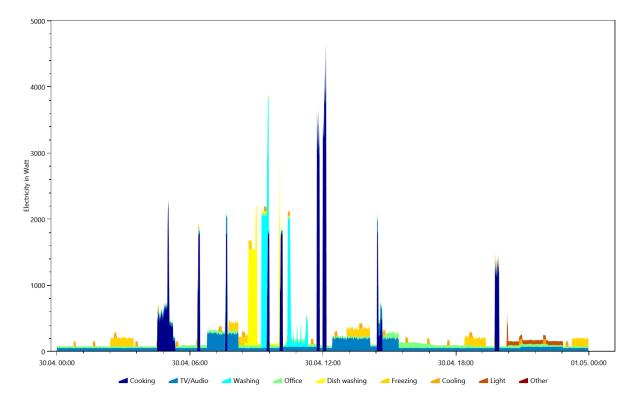


## Electricity, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.7.1



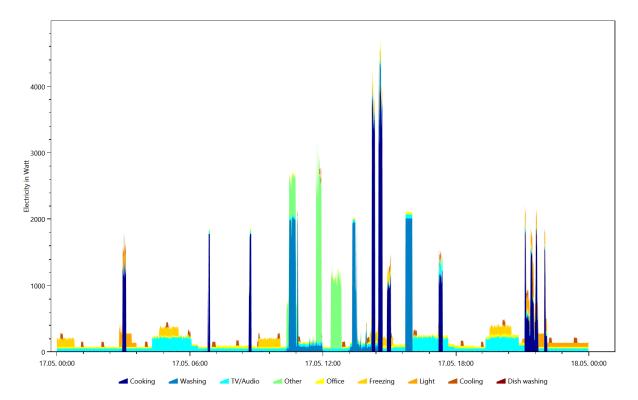
#### Electricity, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.1.30

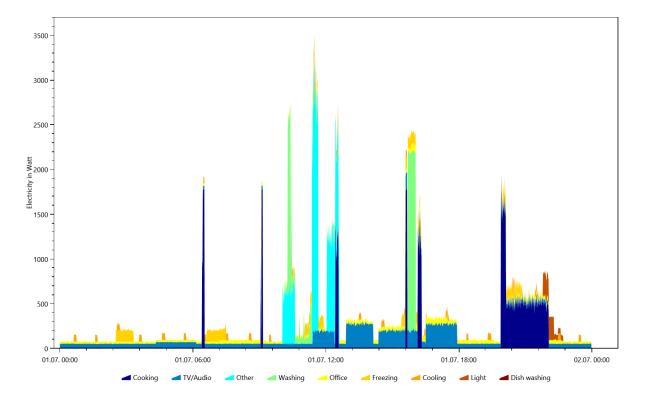




Electricity, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.4.30

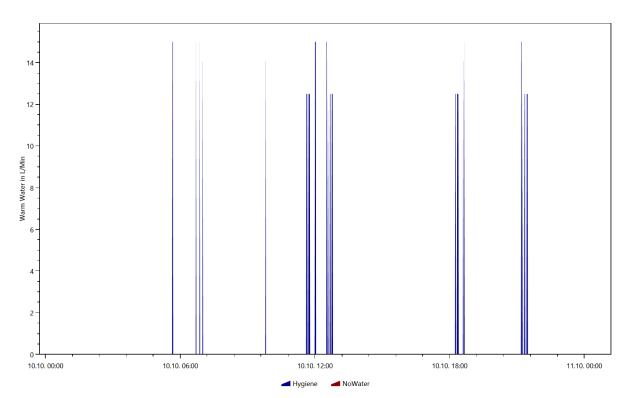
Electricity, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.5.17



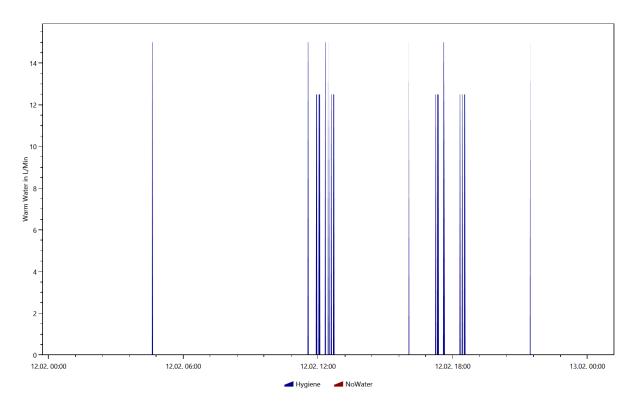


Electricity, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.7.1

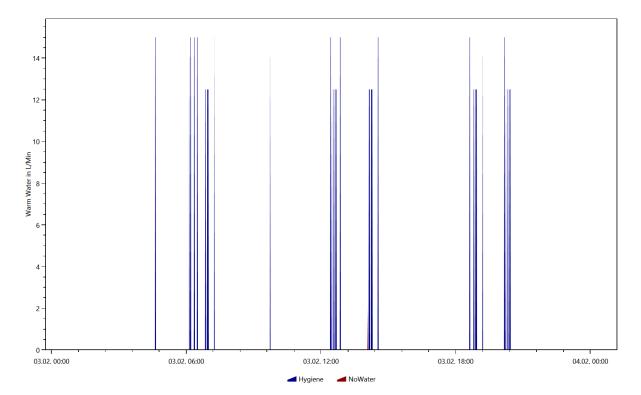
Warm Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.10.10



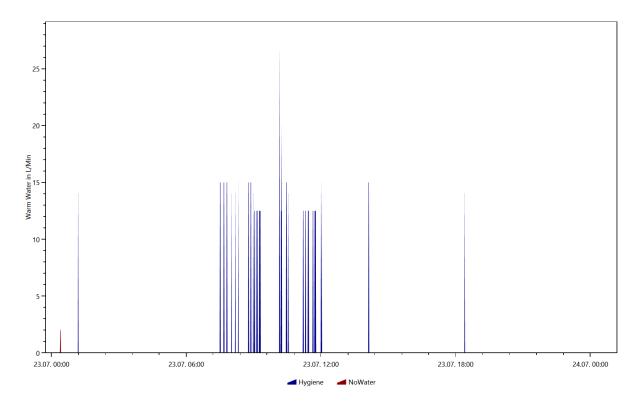
# Warm Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.2.12



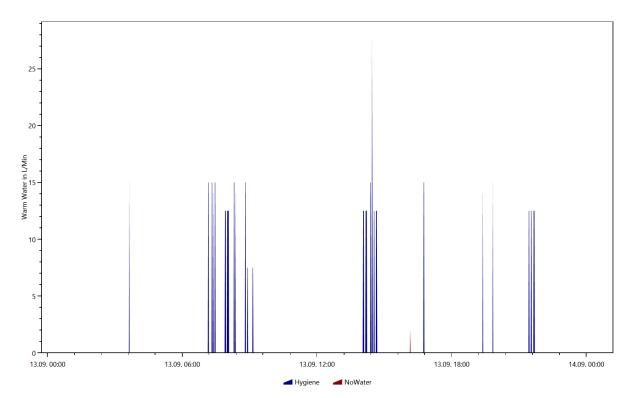
Warm Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.2.3



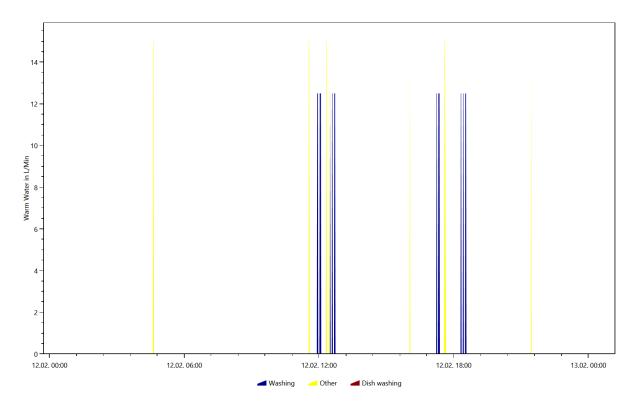
Warm Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.7.23



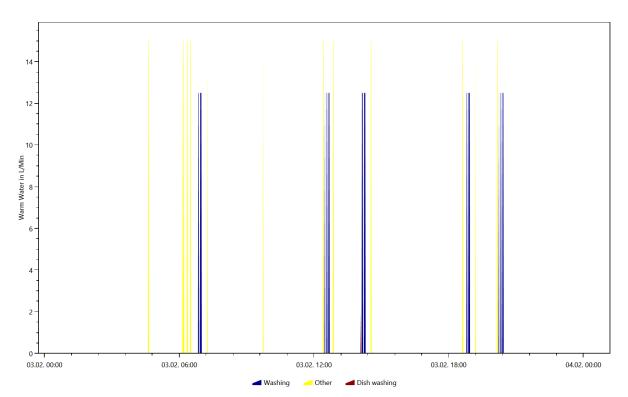
Warm Water, Coloring Scheme: Destatis Water Usage Statistics, Date 2016.9.13



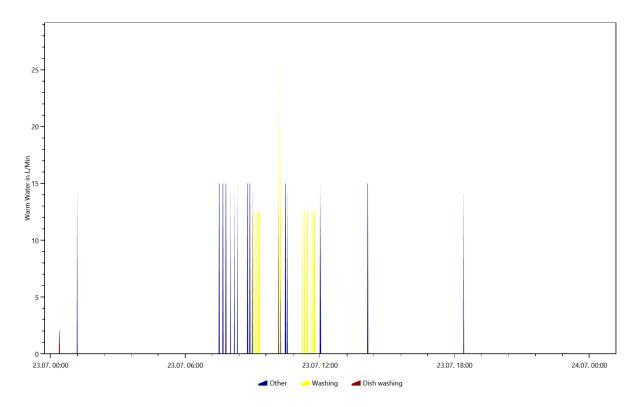
# Warm Water, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.2.12



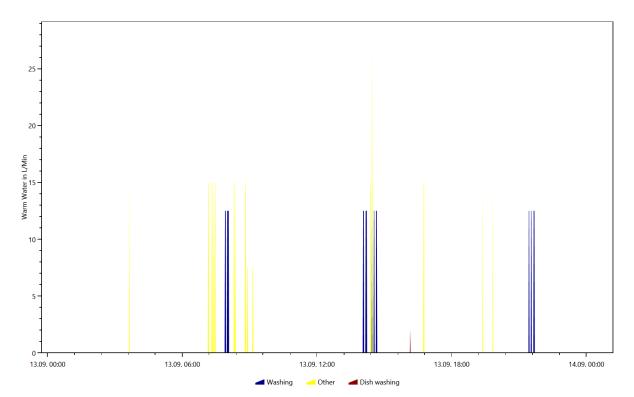




# Warm Water, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.7.23



Warm Water, Coloring Scheme: Energieagentur.NRW Tags, Date 2016.9.13

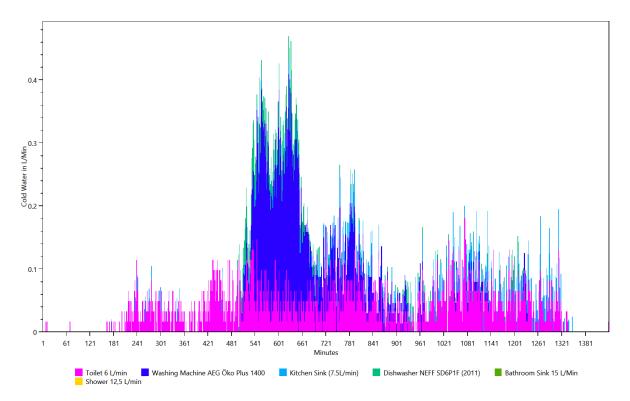


# Overview of the time and power of the use per load type per device

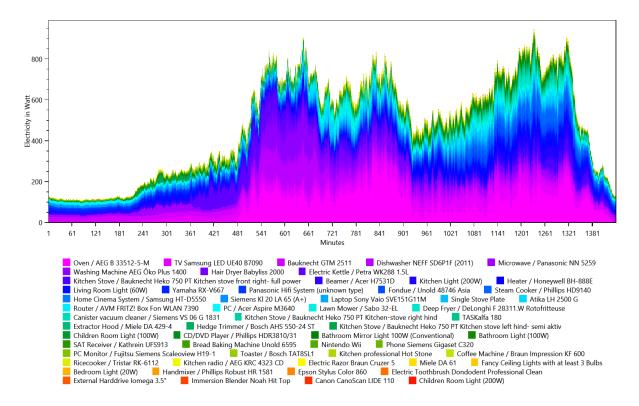
#### This is made from the files starting with: TimeOfUseEnergyProfiles

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

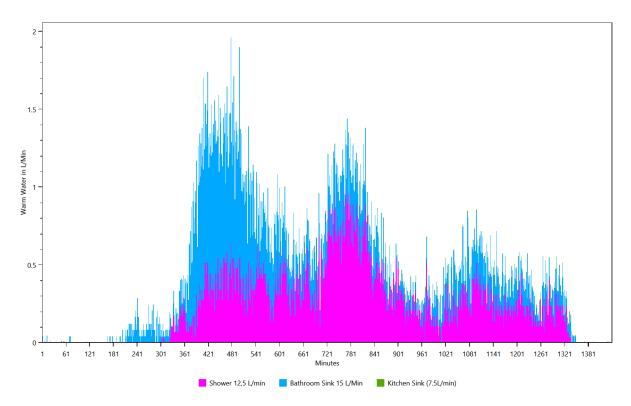
#### Cold Water



#### Electricity



Warm Water

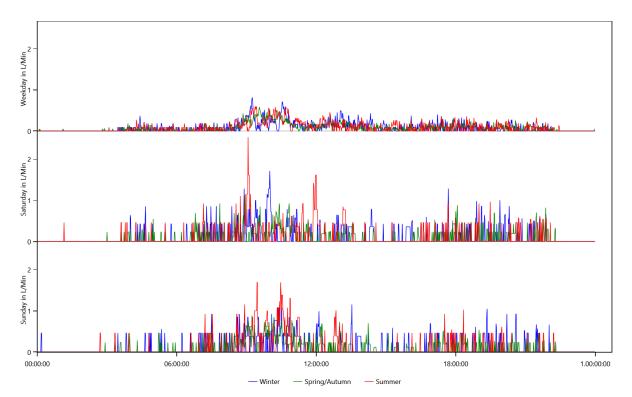


# Energy use per load type during different seasons, split by weekday/saturday/sunday

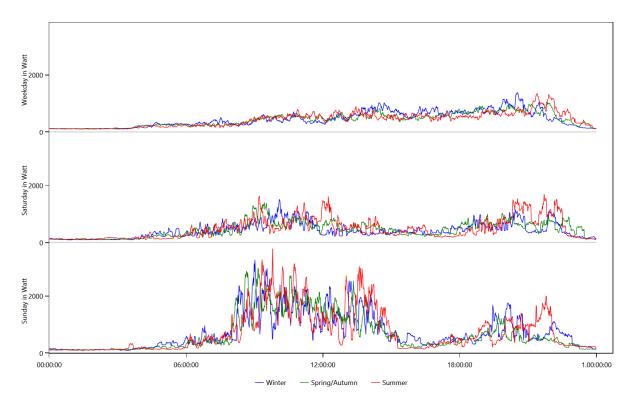
#### This is made from the files starting with: WeekdayProfiles

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

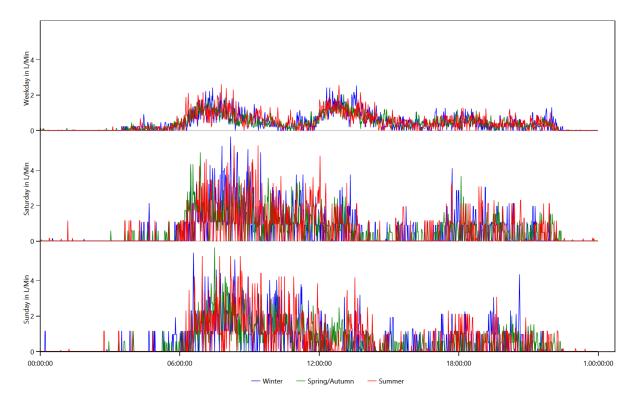
#### Cold Water



### Electricity





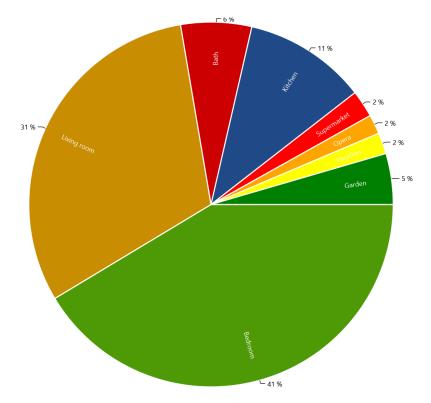


### **Location Distribution per Person**

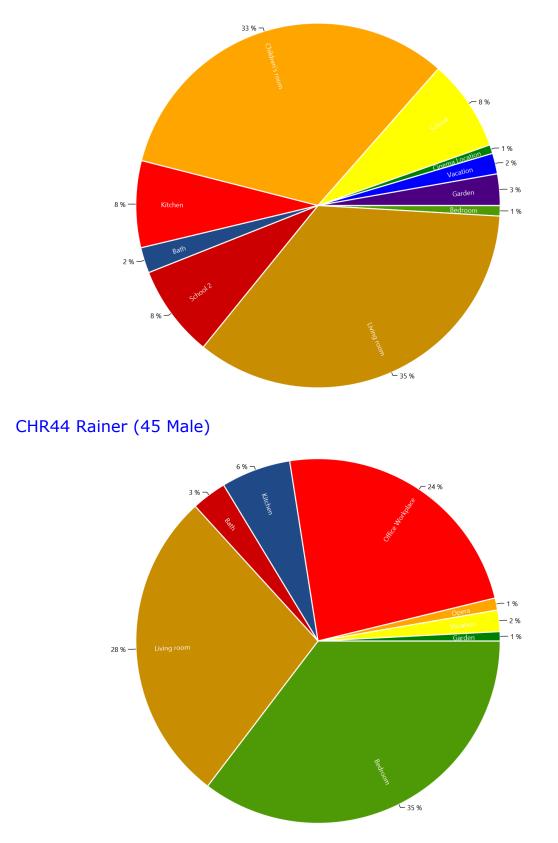
#### This is made from the files starting with: LocationStatistics

These charts show where the persons spend their time.

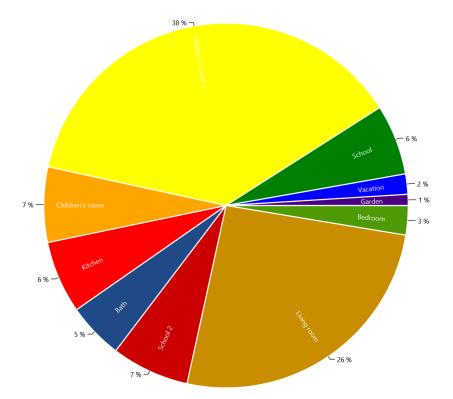
#### CHR44 Barbara (43 Female)



### CHR44 Christopher (16 Male)



#### CHR44 Sandy (14 Female)



### 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;CHR44 Barbara (43/Female);sleep bed 02 (10 h);sleep;False; 0;01.01.2016 00:00;CHR44 Christopher (16/Male);sleep bed 03 (08 h) Child;sleep;False; 0;01.01.2016 00:00;CHR44 Rainer (45/Male);sleep bed 08 (08 h);sleep;False; 0;01.01.2016 00:00;CHR44 Sandy (14/Female);sleep bed 05 (10 h) Child;sleep;False; 243;01.01.2016 04:03;CHR44 Christopher (16/Male);use the laptop for Internet, Movie, Music, News (2 h);Active Entertainment (Computer, Internet etc);False; 362;01.01.2016 06:02;CHR44 Christopher (16/Male);go to grammer school;school;False; 412;01.01.2016 06:52;CHR44 Rainer (45/Male);get ready in the morning (men);hygiene;False; 423;01.01.2016 07:03;CHR44 Rainer (45/Male);eat small breakfast (25min) interruping subaff, no alarm;cooking;False; 447;01.01.2016 07:27;CHR44 Rainer (45/Male);watch a movie for 2 h with home cinema system;Passive Entertainment (TV etc.);False; 509;01.01.2016 08:29;CHR44 Sandy (14/Female);get ready in the morning (children);hygiene;False; 520;01.01.2016 08:40;CHR44 Sandy (14/Female);eat small breakfast (25min) interruping subaff, no alarm;cooking;False; 537;01.01.2016 08:57;CHR44 Barbara (43/Female);run the dishwasher (triggered);cleaning;False; 547;01.01.2016 09:07;CHR44 Sandy (14/Female);use the laptop for Internet, Movie, Music, News (2 h);Active Entertainment (Computer, Internet etc);False;

554;01.01.2016 09:14;CHR44 Barbara (43/Female);eat small breakfast (25min) interruping subaff, no alarm;cooking;False;

571;01.01.2016 09:31;CHR44 Rainer (45/Male);work at the office from 8:00 (9 h);work;False;

580;01.01.2016 09:40;CHR44 Barbara (43/Female);get ready in the morning (women);hygiene;False;

598;01.01.2016 09:58;CHR44 Barbara (43/Female);play board games (1 h);Offline Entertainment;False;

663;01.01.2016 11:03;CHR44 Barbara (43/Female);go to the toilet;hygiene;False;

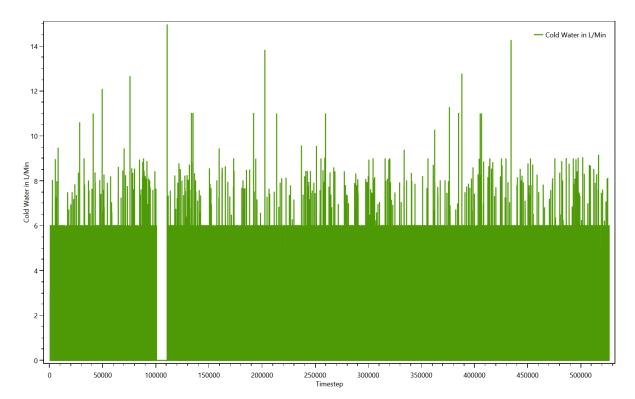
665;01.01.2016 11:05;CHR44 Sandy (14/Female);watch a movie for 1 h 30 min with home cinema system;Passive Entertainment (TV etc.);False;

### **Sum Profiles**

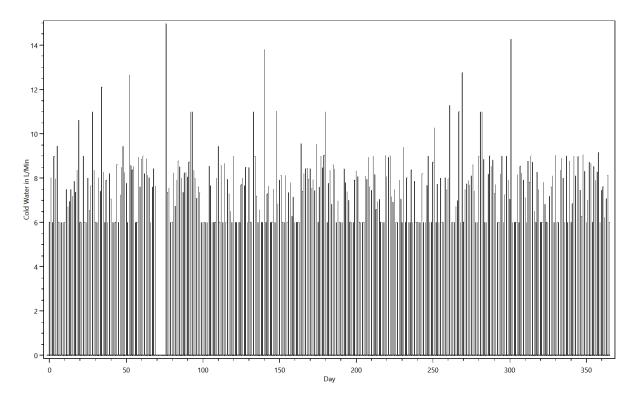
#### This is made from the files starting with: SumProfiles

This shows the energy use during the simulation.

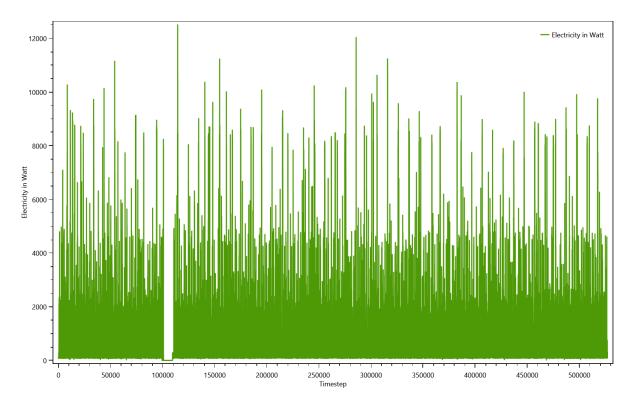
#### Summed up curve for Cold Water from SumProfiles.Cold Water.png



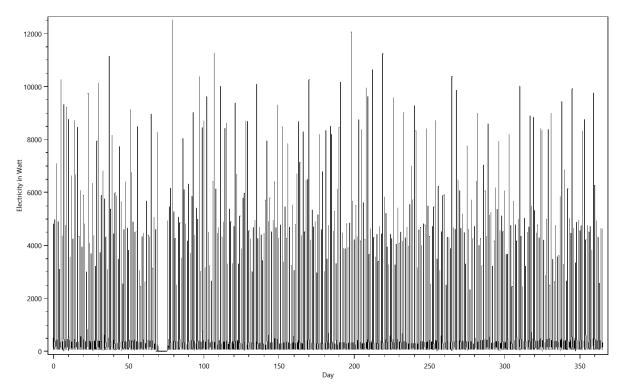




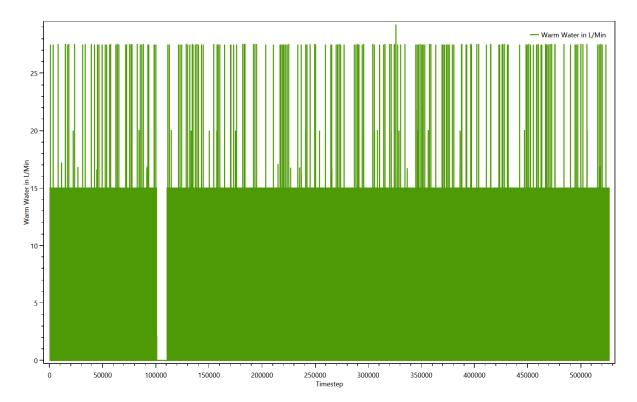


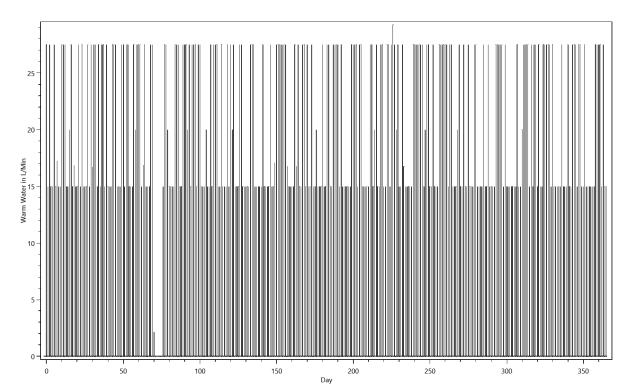






Summed up curve for Warm Water from SumProfiles.Warm Water.png





# 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.CHR44 Family with 2 children, 1 at work, 1 at home 0.txt

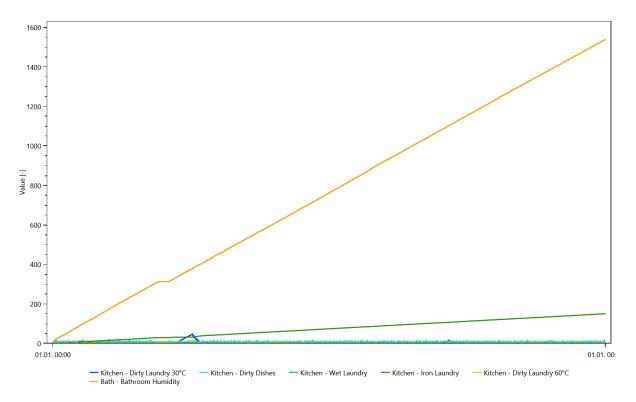
Device:Load Type:Profile:Number of Activations Atika LH 2500 G;Electricity;0 h 15 min 100% [Synthetic];110 Bathroom Light (100W); Electricity; Bath - light [Synthetic for Light Device]; 1201 Bathroom Mirror Light 100W (Conventional); Electricity; Bath - light [Synthetic for Light Device]; 1201 Bathroom Sink 15 L/Min; Warm Water; 0 h 01 min 100% [Synthetic]; 5044 Bathroom Sink 15 L/Min; Warm Water; 0 h 01 min 50% [Synthetic]; 420 Bauknecht GTM 2511;Electricity;0 h 01 min 100% [Synthetic];282 Bauknecht GTM 2511;Electricity;05 h 0 min Fridge, 1h 100%, 4h 0% [Synthetic];1733 Beamer / Acer H7531D;Electricity;02 h 0 min 100% [Synthetic];25 Beamer / Acer H7531D: Electricity: Standby PC 01 h 0 min 4% [Synthetic]: 8616 Bed 2;None;10 h 0 min 100% [Synthetic];361 Bed 3 (Children); None; 08 h 0 min 100% [Synthetic]; 360 Bed 5;None;10 h 0 min 100% [Synthetic];348 Bed 5;None;12h 0 min 100% [Synthetic];15 Bed 8;None;08 h 0 min 100% [Synthetic];359 Bedroom Light (20W); Electricity; Bedroom - light [Synthetic for Light Device]; 110 Board Games; None; 01 h 0 min 100% [Synthetic]; 359 Book;None;01 h 0 min 100% [Synthetic];29 Bread Baking Machine Unold 6595; Electricity; Profile for Bread Baking Machine Unold 6595 Electricity [Measured 1 min Resolution (TUC)];96 CD/DVD Player / Phillips HDR3810/31;Electricity;01 h 30 min 100% [Synthetic];542

### 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

