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Power flexibility in a property

Independent Project in Electrical Engineering

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Abstract

Sweden has since a few years back suffered from a bottleneck in the power transmission lines stemming from a lack of "space" on the grid that transports the power that is generated in the northern parts to the middle and southern parts of the country. A long-term solution would be to increase the grid's capacity by building more transmission lines, however in the meantime, a short-term solution would be to increase our power flexibility. Meaning that the energy consumption gets moved from hours of high demand to hours with low demand and by shutting off equipment. This is called power flexibility and has been researched more in recent times in projects like this. This project will mainly focus on demand-side flexibility which is about how the consumers use their electrical power.

In collaboration with *Uppsala Arenor och Fastigheter*, power usage in one of the company's properties will be made more flexible. This is achieved by mapping how much power each part of the property utilizes and estimating how much power the electrical equipment in that area consumes. Then determining if that piece of equipment can be either rescheduled to avoid hours of high-power demand in Uppsala or turned off without causing major consequences to the property. From this it will be decided if it can be added as a flexibility resource and after that the total power flexibility of the facility will be tallied. Lastly, suggestions on how to implement the power flexibility resources and recommendations for further improvements in future projects will be made.

The results of the project were that the selected property *Studenternas* had an average power usage of 185kW during the day and of that 38% could be utilized as a power flexibility resource. The total power flexibility was therefore 71.2 kW which comes from the laundry rooms and the arena lighting while the other places in the facility contributed with a neglectable amount.

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Contents

Vocabulary: Keywords in English vs Swedish

Electrical box – Elcentral

Ventilation recess – Ventilationsurtag

Operation technician – Drifttekniker

Grid-side flexibility – Nätverksflexibilitet

Demand-side flexibility – Efterfrågeflexibilitet

1. Introduction

This technical report is intended to sum up the work done as part of the course *Independent Project in Electrical Engineering.* The focus will be on the issue of supply and demand misalignment in the power grid and how consumers of the grid can shift their loads in order to reduce cost and peak power consumption. Additionally, Sweden has suffered from a power transmission bottleneck in which there is an overproduction in the northern region and supply deficit in the rest of the country stemming from a lack of "space" on the grid. These issues have a compounding effect resulting in a strained grid. To counteract this, we try to move our energy consumption from hours of high demand to hours when the demand is low and by shutting off equipment that can easily be turned off and utilized at another time. This is called power flexibility and has been researched more in recent times. The focus has either been on grid-side flexibility or demand-side flexibility, where grid-side [1] is when the power network uses its flexibility resources to manage the changes in power demand, while demand-side [2], [3] is about the consumers usage of electrical power. The main focus of this report will be demand-side flexibility and will be explored for a specific facility.

1.1 Project Description

The purpose of this project is to allocate demand-side flexibility by analyzing the utilization of power in a property. To succeed in this endeavor, we will map a property's various electrical equipment and from this see how to maximize power flexibility. By changing the equipments' running hours and or simply turning it off at peak hours, if possible, this way we will gain demand-side flexibility.

The main points of the project are as follows:

- Together with *Uppsala Arenor och Fastigheter*, identify a suitable property to analyze
- With the help of data from the property, conduct an inventory of the property's various electrical equipment and estimate how much power each equipment draws
- Estimate which equipment can be turned off or have its timetable changed and hence contribute to power flexibility
- Calculate and present how much power is flexible in the property
- Recommend actions that can maximize and increase the property's power flexibility
- Give recommendation for future studies on power flexibility and recommendations for *Uppsala Arenor och Fastigheter*

2. Theory

2.1 Power & Energy

Power is generally defined as the rate at which energy is produced or used and when it comes to electrical power the unit of power is watt [W]. Watt is equal to one joule per second, so when equipment is consuming power, it's going to be an energy consumption over time, and this tends to be measured in kilowatts [kW]. Power is therefore a measure of instantaneous energy per unit time and not total energy consumed. Total energy consumed is usually measured in kilowatt hours [kWh] and is calculated by multiplying power with time in hours.

$$E = P \cdot t \quad (1)$$

$$E = \int P(t) \cdot dt \quad (2)$$

2.2 CoordiNet Project

CoordiNet is an EU innovation project that started in January 2019 and its purpose is to develop and test different market solutions that may decrease the power consumption on the grid when it is strained by heavy loads. The project is currently being conducted in Spain, Greece, and Sweden. In Uppsala, it began in January 2020 with *Vattenfall Eldistribution* as the main entity in charge. By buying power of the flexibility resources, they can free capacity in that moment. The flexibility resources come from users that can upon notice do one of the following:

- Increase their electricity production
- Decrease their power consumption

This market is badly suited for small organizations and is more intended for larger organizations, therefore there exists a limit to the least amount of power that must be met. Though small organizations bind together to participate in the market [4].

2.3 Load on the Grid

The load on the grid varies a lot throughout the day and it is during certain times that the grid is more strained. Data from Uppsala UPP[1] shows that the grid experiences its highest loads between the hours 12 and 20. In the figures below[2] the average energy consumption is shown on a per hour basis for the years 2018-2021.

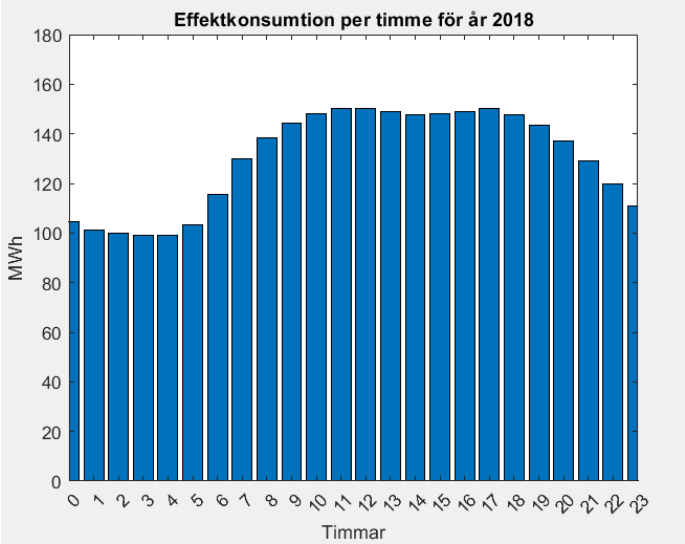

Figure 1: Power consumption on a per hour basis for year 2018

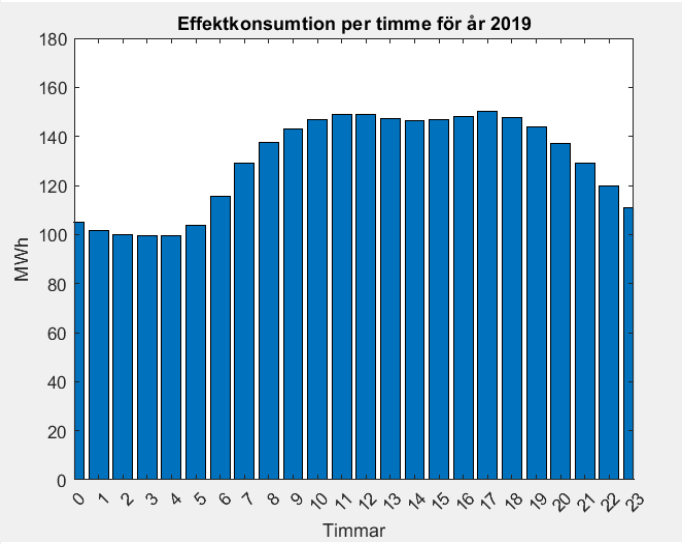

Figure 2: Power consumption on a per hour basis for year 2019

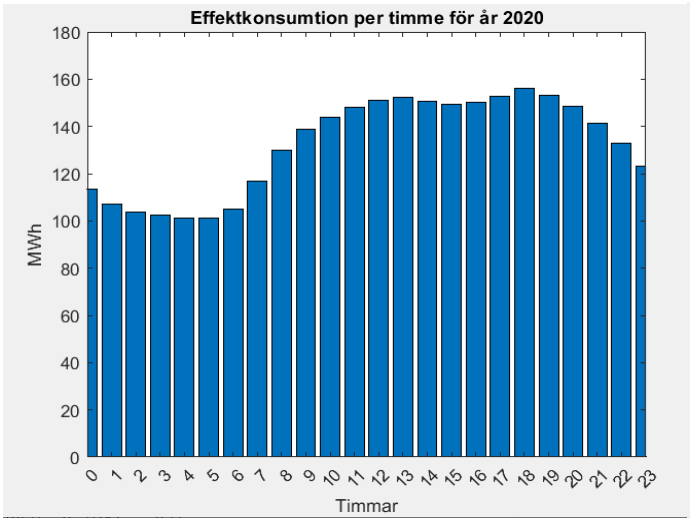

Figure 3: Power consumption on a per hour basis for year 2020

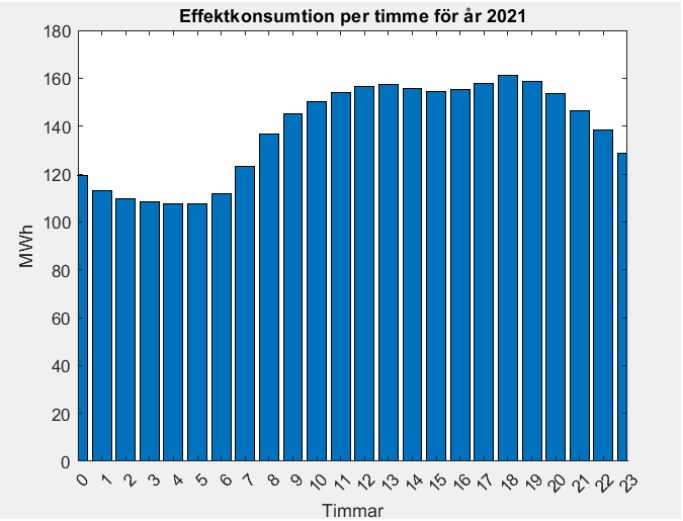

Figure 4: Power consumption on a per hour basis for year 2021

[1] An illustration of the area is attached in Appendix A1
[2] Created in Matlab using the code in Appendix A3

3. Facility

3.1 Selection of the property

In the project description it was stated that together with *Uppsala Arenor och Fastigheter*, a suitable location to analyze was to be found. It was soon realized that a large building with a lot of equipment and high-power consumption was needed. Based on this requirement and recommendations from *Uppsala Arenor och Fastigheter*, three different properties were considered from a list of possible facilities[3], *Stadshuset*, *Fyrishov* and *Studenternas*.

Stadshuset was considered because of it being a new building with a lot of modern systems and according to *Uppsala Arenor och Fastigheter* had the possibility of having large amounts of data. However, it was not chosen to be analyzed because when reaching out, the representatives stated that it had stood mostly empty during the pandemic. So, the recent data would differ from normal use of the facility. They also stated that they simply didn't have time to help as they were busy.

Fyrishov was quickly disregarded because of its old age and its lack of internal measuring instruments. Therefore, it would be hard to examine the consumption of the different parts of the facility.

Studenternas was the property chosen to be analyzed in this project. It was chosen because of it being a new modern building with a lot of varying use and power consumption. When reaching out to the facility, they seemed more willing to help than the other properties and the building hasn't been left empty in recent times. So out of the three alternatives, it seemed to be the best fit for this project.

[3] See appendix A2 for list of considered properties

3.2 Studenternas

Studenternas is a multi-use stadium located at *Ulleråkersvägen 4B, 753 09 Uppsala*. It has artificial grass and can host 6000 to 10 000 people for football events. The stadium is not only for sport use but can also be used for concerts and other events. The facility also contains a commercial area of 10 600 square meters over seven floors. In this area they host restaurants, cafés, a gym, and offices for a bunch of varying corporations and businesses. A few examples would be *Brasseri21* on floor 0 (basement floor), *NordicWellness* on floor 1, VIP-lounge on floor 2 and the rest being rented out to different tenants. Lastly, *Studenternas* can also be utilized for winter sports like bandy by laying ice on its fields.

In appendix A4 are different drawings of where *Studenternas* various locations and places are positioned. *Studenternas* uses a list of names in their documentation to differentiate between individual regions. Every floor of the facility gets a specific name F10-F17 coupled with a number that points to a room. For example, the facility's two laundry rooms are assigned the name F10.007 & F10.094 which means that they are located on the basement floor (floor 0) while the fourth floor's ventilation systems have the name F14 plus a number for the specific room.

In this report it will often be referenced to different specific codes that indicate which area of the building certain equipment is in and where that equipment power is being supplied to. As to not insert a large number of illustrations of the facility's drawings in the report, the documentations will be attached in appendix A4.

3.3 Complications

When interviewing an operations technician, it was discovered that much of the data over power and energy consumption for the different parts of the property wasn't being saved and that the systems for logging of data hadn't been handed over yet to them. As a result of the lack of saved data from different parts and rooms of *Studenternas*, data had to be manually saved which was done over a span of three days.

Because of the need to observe the facilities electrical boxes at different hours and those electrical boxes being in restricted areas we needed to be always accompanied by a certificated operations technician. This restricted the possible data reading times to be between 9-15 of a workday.

Tabell 1[4]: How the manual readings will be structured and what will be measured.

HOURS FOR MANUAL READINGS	WHAT WE ARE GOING TO MEASURE
09:00 & 09:30	Power [kW] & energy [kWh]
10:00 & 10:30	Power [kW] & energy [kWh]
11:00 & 11:30	Power [kW] & energy [kWh]
12:00 & 12:30	Power [kW] & energy [kWh]
13:00 & 13:30	Power [kW] & energy [kWh]
14:00 & 14:30	Power [kW] & energy [kWh]
15:00	Power [kW] & energy [kWh]

3.4 Data from Vattenfall Eldistribution

Studying *Studenternas* energy consumption recorded in *Vattenfall Eldistribution* it can be seen that the buildings usage tends to be higher than usual between 6-20. This project will focus more on maximizing power flexibility between the hours 9-15 as it aligns with the working hours of our contact person. As an exception to the usual daily cycle the energy usage increases by 60-80% every time there is an event. The detailed consumption data for these events will not be collected because they occur outside the time interval we're limited by and essentially all of the equipment has to be utilized at the time of an event [5].

[4] Created in Excel

Below are some examples of *Studenternas* energy consumption taken from *Vattenfall Eldistribution*:

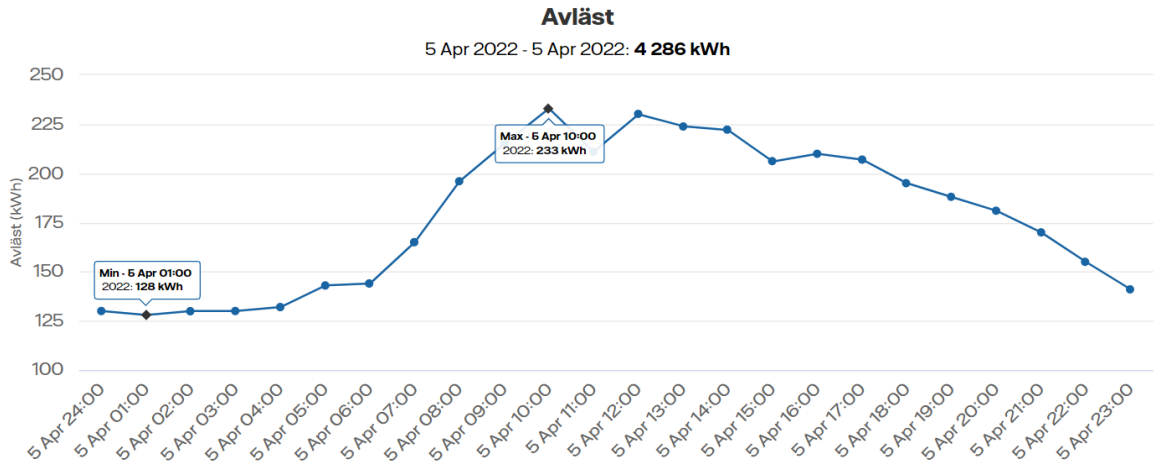

Figure 5: Studenternas measured energy consumption on the 5th of April.

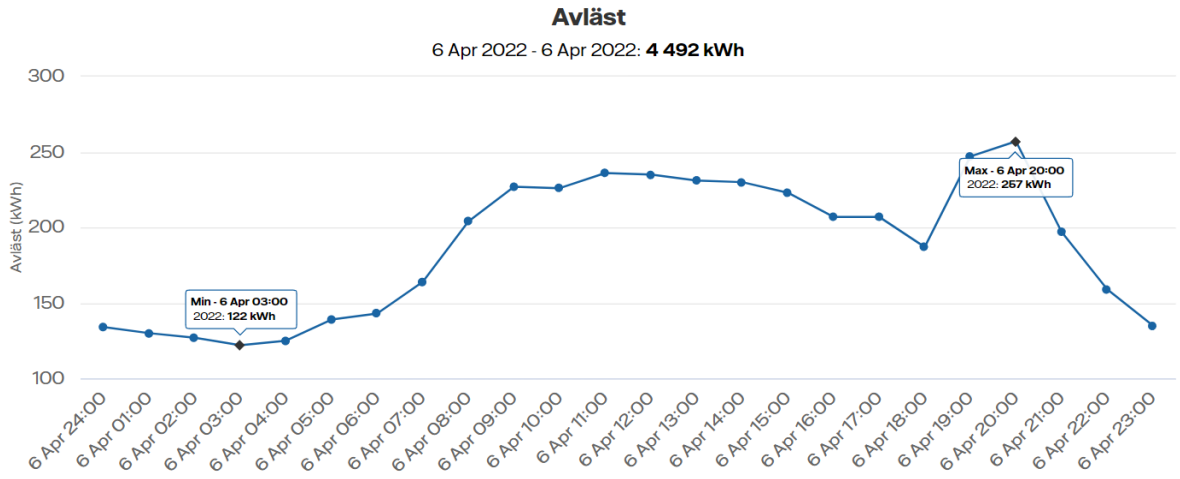

Figure 6: Studenternas measured energy consumption on the 6th of April.

3.5 Tenants in the facility

Studenternas rents out many of its rooms and areas to different companies. These companies are therefore tenants to *Studenternas* and thus not a part of *Uppsala Arenor och Fastigheter*. Which means they are responsible for their own power consumption. Therefore, we cannot order them to shut off equipment to add to the facility's power flexibility. Even though they might use some of the most demanding appliances.

4. Power flexibility & Inventory

The estimation of power flexibility and inventory of the electrical equipment of Studenternas will be based on data acquired from the internal distribution center. In which multiple meters display live data and each meter would either be for single rooms with large electrical equipment or for electrical boxes that went to entire areas of the facility.

In this estimation and inventory certain meters and equipment will be neglected since their power consumption has been shown to be negligible and their respective locations not having any potential big loads connected. They will not be brought up in the report because they don't have any potential to contribute in terms of power flexibility. The same goes for equipment that have such low power consumption that even if they were turned off it wouldn't help to relieve the grid during peak power consumption in Uppsala. Additionally, equipment that consumes constant power but is vital to the operation of the facility cannot be tampered with and is therefore not regarded as flexible.

4.1 Plots

The following plots[5] show the manually recorded power and cumulative energy consumed during the dates of 27-29 of April in *Studenternas*. The individual values in the plots are the mean of that time period. There was a total of 35 meters in the distribution center that was recorded and plotted but only the ones of relevancy and high power and energy consumption will be showcased with the remainder shown in appendix A3.

[5] Created in Matlab using the code in Appendix A6

In the basement floor drawings (see Appendix A4), F10.006 is in the region labeled as B311-T1-N51A3 and it is in control of part of the arenas' lightning.

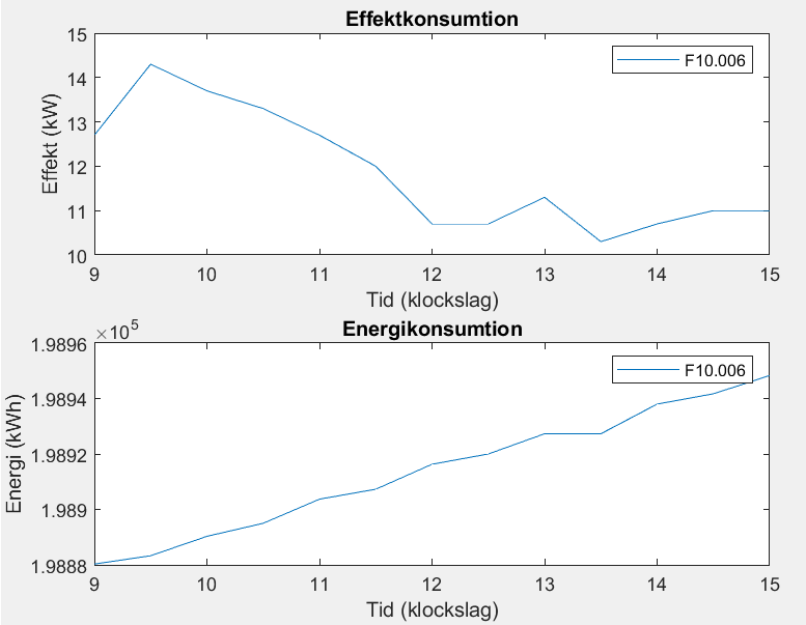

Figure 7: Average power and energy consumption over the span of three days for F10.006.

F10.153 displays power and energy consumed in the VIP-lounge located in floor 2 and if we look at the following figure, we can see that between 10:30 and 11:30 is a peak in the power consumed.

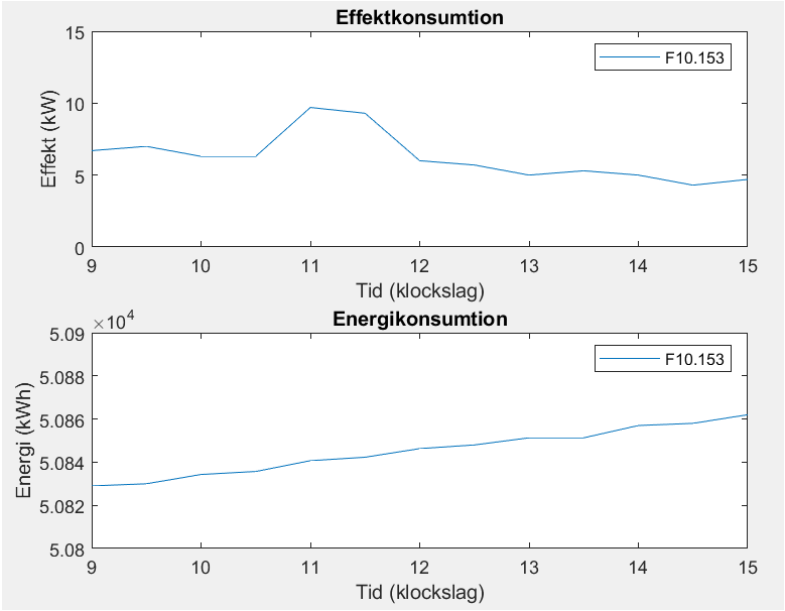

Figure 8: Average power and energy consumption over the span of three days for F10.153.

F10.155 is the electrical box responsible for the power usage of all the elevators in *Studenternas*. In the drawings for the basement floor (see Appendix A4) F10.155 is the region labeled B311-T2-N22A2.

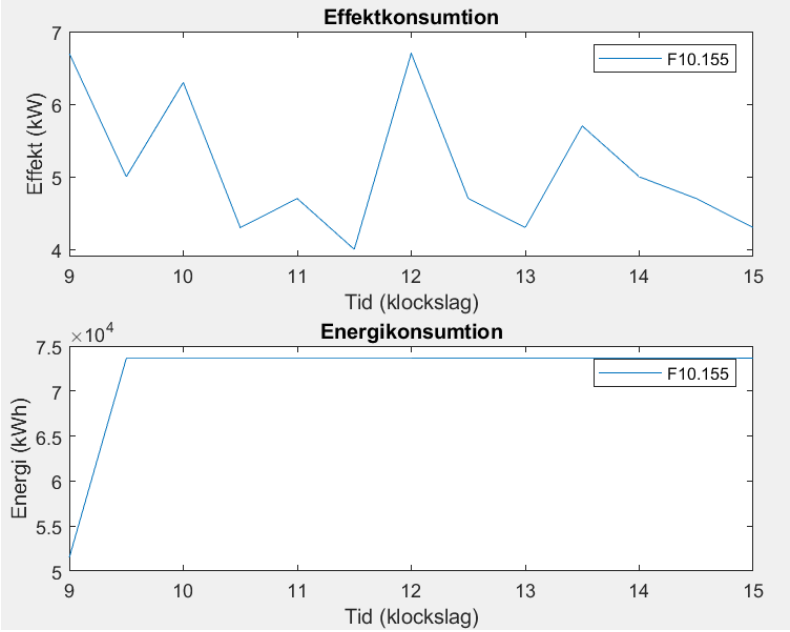

Figure 9: Average power and energy consumption over the span of three days for F10.155.

F10.311 shows how much power and energy one of *Studenternas* tenants, *Brasseri21*, is using.

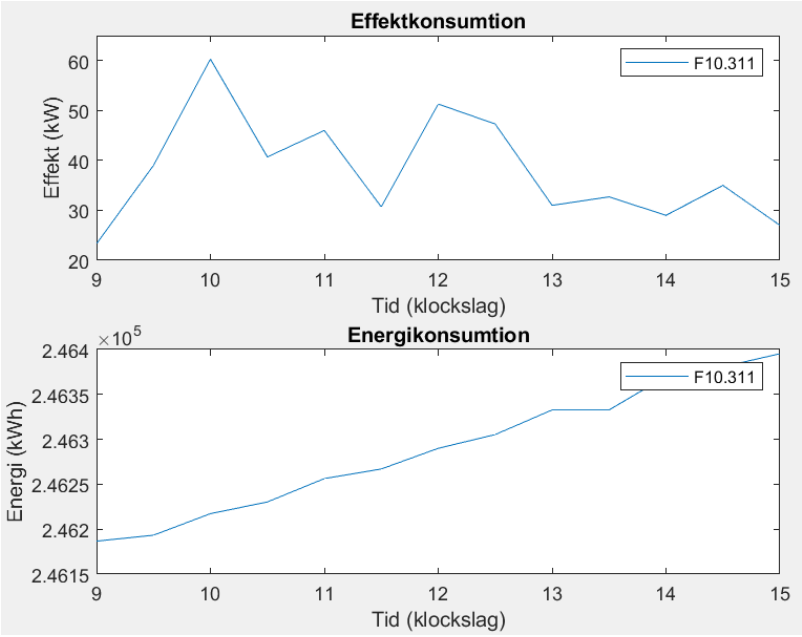

Figure 10: Average power and energy consumption over the span of three days for F10.311.

The F14-002 meter showed the data for air handling systems that was located in a room on the fourth floor of the commercial area.

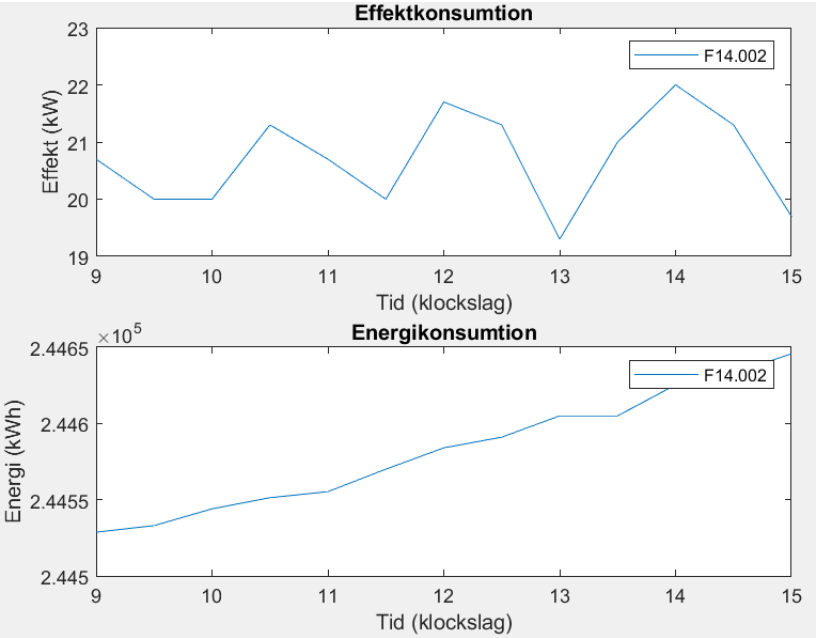

Figure 11: Average power and energy consumption over the span of three days for F14.002.

F14.018 is an electrical box that supplies power to the region labeled B311-T2-N14A2 in the drawings for the fourth floor (see Appendix A4). The documentation for this electrical box stated that it was connected to the entire floor except the room that the F14-002 meter went to.

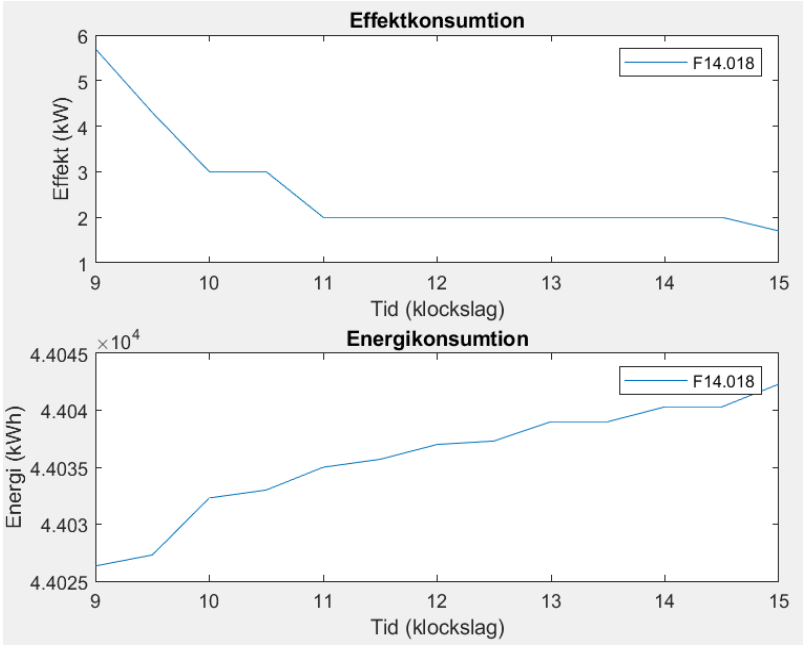

Figure 12: Average power and energy consumption over the span of three days for F14.018.

4.2 Inventory

4.2.1 Air handling systems

The air handling systems of *Studenternas* were found to be carried out by seven electrical appliances which were four *Swegon GOLD RX70* systems, two *Swegon GOLD RX50* and one *Swegon GOLD RX014.* Gold RX is an air handling unit with rotary heat exchanger which is utilized for ventilation for large areas of buildings. The number after *RX* denotes the size of the unit with greater numbers meaning larger systems [6].

Three of the *RX70* and one *RX50* were in F14.002 and were the only piece of equipment in that room. According to the data collected in *figure* 11, which shows that the systems are using 9-22 kW from 9:00-15:00. Hence the estimation from the data is that these four systems draw a mean of 20.69 kW power as they are the only power consumers there.

The remaining one *RX70* and one *RX50* are in F14.018 and according to *figure 12*, are using between 1-6 kW from 9:00-15:00. This means that each of the systems draws a mean of 2.59 kW. The fourth floor is currently unoccupied by any companies and thus, there isn't any electrical equipment except the air handling systems. The assumption is thus valid.

The seventh air handling system was a *Swegon Gold RX014* which was the smallest one among the systems and it was in F10.162. With the following plot[6] showing how much power was consumed, it can be estimated that the *RX014* draws a mean of 1.02 kW power.

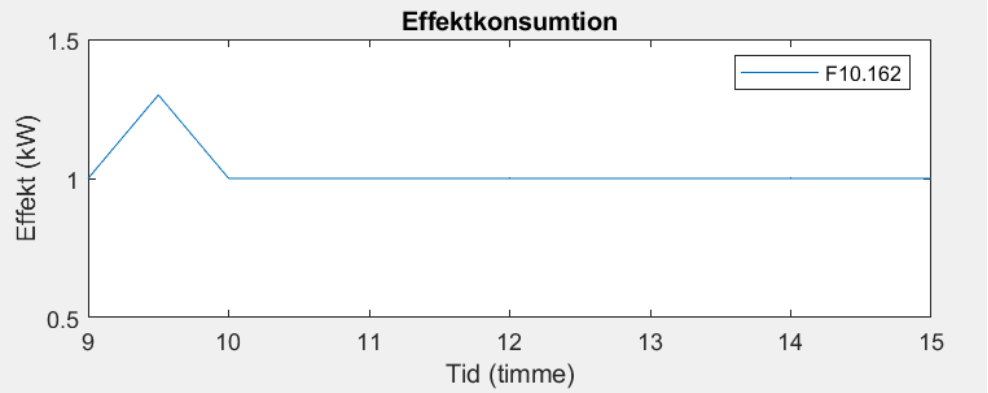

Figure 13: Average power and energy consumption over the span of three days for F10.162.

[6] Created in Matlab using the code in Appendix A6

The above calculated power won't be able to add to the power flexibility of the facility. Not because these air handling systems can't be turned off, the manual for GOLD RX/PX/CX/SD states that you can choose operating mode which includes a stop which would decrease its power consumption to neglectable amount. However, the reason why this is not possible in practice is because the systems run on predetermined programs and sensors that dictate how it operates. So, when the *Swegon GOLD* systems are drawing a lot of power, it's because it's needed. You could also assume that shutting it off could impact the environment negatively for the people working in the building. Therefore, it can't be shut off when there is a need for flexibility resources on the grid in Uppsala and will not contribute to the power flexibility of Studenternas [7].

However, if you could optimize the operating schedule in such a way that its general power consumption decreases it could add to the power flexibility of Studenternas. Because under the *Time and schedule* the manual states that the preset operating modes can be controlled by changing operating times/modes. To be able to do this, a large amount of data of power consumption over a long period of time and other possible relevant data for example occupancy data for the offices, would be needed to do an in-depth analysis to determine if power could be saved in this way. As Studenternas has not been logging data of the meters according to the operational technician interviewed, there isn't enough material to do such exploration in this project. For this reason, it won't be considered.

4.2.2 Laundry rooms

Studenternas have 2 laundry rooms *F10.007 & F10.094* and are located at the regions B311-T2-N24A1 and B311-T2-N11A1 of the basement floor F10 (floor drawings in Appendix A4). Together, the laundry rooms have eight electrical appliances of interest, four washing machines of the type *Electrolux W575H* and four dryers of the type *Electrolux T5190*.

According to the data sheet for *W575H*, it has a rated total power of 5.5 kW which means that the four washing machines have a total power consumption of 22 kW [8]. The *Electrolux* dryers consume a rated power 6.3 kW which results in the four of them consuming a total of 25.2 kW [9]. This means that both laundry rooms have a peak power consumption of 47.2 kW when all appliances are running.

The calculated power assumes that everything is on and running at maximum power, which isn't most likely because most often you don't use dryers and washing machines at the same time. Also, the washing machines that *Studenternas* use are large industrial ones meant for higher quantities of clothes. So, it's also possible that you wouldn't utilize all the appliances at the same time, as that would require a large amount of laundry. Further from anecdotal experiences when visiting the two laundry rooms, the two teams that inhabited them usually used one washing machine and one dryer at the time. Though they might sometimes use all the appliances, it's more likely that they don't. Therefore, it'll be assumed that both laundry rooms, when utilized, have one washing machine and one dryer operating in both rooms at the same time. This means that the possible power flexibility for the facility is 23.6 kW.

The above estimated power will be added to the power flexibility of the facility. Not because you can easily turn it off without consequence. As turning off the washing machine during a cycle could ruin the laundry and for a dryer increase the drying time, but it's possible to change the timetable for it. Because in *figure* 5, you can see that *Studenternas* has the most power consumption during the hours 10-17, so if these hours are avoided then it would mean a net gain of 23.6 kW of power flexibility. For example, you could have washing times from the mornings up until 10 and then from 18 to the next day. This would mean that the power consumption is outside possible peak hours and would aid in

decreasing power spikes in Uppsala. Therefore, the laundry rooms power consumption will be considered as a power flexibility resource for *Studenternas.*

4.2.3 Arena Lights

Around *Studenternas* arena there were 259 spotlights counted, with every three pieces making a pair. The lights used were of the *ArenaVision & OptiVision LED* (gen3) types and from the datasheets you could calculate that both had a similar power consumption of 2.3-4.2 kW per pair [10].

This means that when all the arena lighting is on, the power consumption could range from 199 to 363 kW. Depending on the individual spotlight intensity. However, estimating how much power the arena lighting consumes is not a trivial task. As they are spread out around the arena, they are not connected to a single electrical box and don't have a single meter in the distribution center. Therefore, there is a lack of actual data on how much it consumes and because of this a lot of assumptions must be made about its operation.

A fact is that in *figure 7* you can see the power consumption of a certain area and some of the arena's lighting. Though as that meter is connected to more than the lighting it's not totally indicative of how they're utilized, however if it's assumed that the B311-T1-N51A3 region (Appendix A4) has low power consumption then it can be indicative. From this it can be seen that the spotlights consume more energy during the mornings for it to decrease for the middle of the day (but still remains fairly high). You could also assume that it will increase later on in the evening as the sun sets if there are any people using the football field. *Figure 7* shows that the mean is 11.9 kW which is probably lower than the actual mean as we lack data from the evening. Another assumption that will be made is that the electrical box is located on one of the broadsides of the arena and thus supplies power to all the spotlights on that side. Therefore, with the four sides of the arena and the mean of 11.9 kW accounting for a fourth of the lights, the total power consumption is estimated to be 47.6 kW. Which is around 13%-24% of the arena lightning's total power.

The estimated power of 47.6 kW can be added to the power flexibility of *Studenternas* as the LED lights can easily be turned off at a moment's notice. In addition to being easy to turn on again once the

power flexibility resources are no longer needed. Though the reason they are always on is because of the shadows formed at the corners of the arena. Turning them off could possibly anger the people utilizing the field for practice or other reasons but that is a small consequence that can be neglected if it's during the hours when power consumption usually spikes. As those hours are the ones when the sun is often in the middle of the sky and the shadows on the corners should be minimal. This combined with the fact that power flexibility is probably more prioritized. Therefore, the arena lights power consumption will be considered as a power flexibility resource for *Studenternas*.

4.3 Total Power flexibility

Summation of all estimated power that could be added in section 4 gives that *Studenternas* has a total power flexibility of 71.2 kW. Those 71.2 kW comes entirely from the laundry rooms and the arena lightning's with the other places contributing with neglectable amounts or supplying power to the tenants of *Studenternas*.

5. Discussion

According to the data taken from the distribution center, between the 27-29 of April *Studenternas* power usage on average was around 185kW. Moreover, as explained in section 4.3 we were able to gather power flexibility resources amounting to 71.2kW. This means that *Studenternas* can shut off equipment that on average is around 38% of the facility's power consumption and therefore could contribute to the power flexibility of Uppsala.

One thing that was visible from the data taken in the distribution center was that the biggest consumers of power were not *Uppsala Arenor och Fastigheter* themself but rather the corporations renting space in their commercial area. From *figure 10* you can see the power consumption of *Brasserie21* which was according to the data taken, the consumer with the highest average and spike power use. Therefore, it's easy to imagine that perhaps they could've been a potential source of power flexibility, but this was something that could not be explored. They as a private company and tenant could not be ordered by *Uppsala Arenor och Fastigheter*, at a moment's notice, to shut off equipment to aid in relieving the grid. That's why we had to exclude them from the project even though they could've been the biggest source of power flexibility and an interesting venue to examine. The same goes for other private companies that occupied space in the commercial area.

Regarding the power used to keep the elevators operational, as shown in *figure 9*. The elevator's power consumption has many spikes at different hours of the day. Those power spikes could've been a source to explore but, due to them being associated with the usage of *Studenternas* elevators they're unavailable. As it's not reasonable to demand that people stop using elevators to lower the energy consumption and consequently exclude people with disabilities from the facility. True for a seven-floor building where it's an arduous task to always take the stairs.

Due to the time limitations of this project, the data taken from the distribution center only amounted for three workdays. This came from the fact that we hadn't expected the need to take manual readings at *Studenternas* as the building was newly constructed and it was assumed that logging of data was underway. Then it was discovered that the systems that had the possibility of logging data hadn't been

started yet. Therefore, we had to prepare and take our own measurements distribution center, and we restricted this to three days as the core of this project was the inventory and the estimation if electrical equipment could be turned off. Though more data points could have made it much easier in estimating how much power certain equipment draws and understanding its patterns. This means that if *Studenternas* would've had logged data it could perhaps have made it possible for us to add a bunch more power flexibility to the facility.

6. Recommendations

6.1 Recommendations for Studenternas

Firstly, we would recommend that *Studenternas* do as discussed in *4.2.2 & 4.2.3* and for example reschedule or create laundry times that are outside the normal hours of high-power consumption in Uppsala. Either like the example we gave in *4.2.*2 or according to the discretion of the administration of the facility. In addition to turning off the arena lights when the power consumption spikes and there is a need for flexibility resources. This would free up 71.2 kW in accordance with our estimation.

Secondly, we would recommend that the facility starts logging the data in the distribution center. As we were told that this is possible and that it is just not being carried out yet. One of the largest complications in this project was the lack of data over a long period of time. Which led to a lot of assumptions needed to be made and made it hard to see any pattern in the power consumption. It's not hard to imagine that more power could've been added to the power flexibility if we had access to such information.

It would also be beneficial to have a means of logging data of the larger electrical equipment to see how the biggest power consumers are utilized and from there try to see how it can be optimized. The ventilations could have perhaps been a source of power flexibility which we couldn't do in section *4.2.1* as no such conclusion could be made from the acquired data we had. Another thing we would recommend is taking data of the occupancy of the facility in how many people that are in the building, at specific times, as that could perhaps be combined with data of the air handling systems to optimize the ventilation.

Lastly, we would recommend that *Studenternas* make a general documentation of electrical equipment it possesses. So that projects and or surveys can easily establish which equipment belongs to the facility and which belongs to the tenants. This would help as it's only the equipment of the facility that was considered in this project. Moreover, if there exists documentation over the facility's equipment, it would be easier to conclude what draws most power and from there examine if it can somehow be optimized to contribute to the power flexibility of *Studenternas.*

6.2 Recommendations for future studies

If future studies about power flexibility are to be made, then our recommendations are to:

- Conduct research about power flexibility at a property where most of its equipment can be taken into consideration. It's not wise to investigate power flexibility resources at a property which has most of its rooms and areas rented out to different companies assuming you don't have access to their equipment.
- Choose a facility in which its power consumption isn't dependent on need. If we look at *Studenternas* we see that most of the facility's equipment is only used when there is a need, this makes it more difficult to find equipment that can be optimized to contribute to power flexibility.

Lastly, it would be ideal if a property to analyze can be chosen directly and contacted so that there is plenty of time to deal with later problems that may occur. As we spent too much time on choosing a property to analyze, it became stressful towards the end because of time limitations. A big complication in this study was the lack of time for taking more measurements and for making a thorough inventory of the facility. One of the reasons for the time-related problems being that we spent too much time choosing a facility, as we visited more than one facility. Time that could have been utilized for other parts of the project. Therefore, it's suggested that if similar studies are conducted, to spend less time on choosing a suitable facility.

6.3 Recommendations for Uppsala Arenor och Fastigheter

What *Uppsala Arenor och Fastigheter* can do better to help future projects like this one would be to be as quick as possible to give keycards and access. That would help any group that is doing any sort of project. As that was one thing that hindered and became a time consumer for us, because it took quite a while for us to gain access. So, we had to rely on technicians and other people working there to open doors and let us into places and they often were busy with their own work which led to delays as they couldn't help us immediately. Another thing that could be beneficial is giving the project

groups a dedicated contact person on the facility in which the project is taking place, who gets time off work to spend that time helping the people doing the project.

Moreover, what *Uppsala Arenor och Fastigheter (Uppsala Arenor)* can do, if they have a project which includes choosing a property from a list like we had to do, is to make it shorter. Because having a shorter list of suitable properties would help groups in choosing the right property, and shorten the time spent choosing. In addition, *Uppsala Arenor* can contact possible properties and let them know that certain groups can visit them. That way, it's easier to exclude properties like *Stadshuset* that did not have the time to help us in this study and therefore save time by not waiting for an answer from properties that don't have the time to aid.

A positive thing was that *Uppsala Arenor* gave us a deadline for the finished report and presentation. But due to the lack of milestones, we couldn't make a good plan on how much time to spend on specific parts of the project. That made it so we basically spent too much time on the initial parts of the project and spent too little time on the later parts, which was the inventory and estimation. Our recommendation for this problem is for *Uppsala Arenor* to plan specific milestones with deadlines so that groups can distribute the workload evenly over the time interval. Additionally, *Uppsala Arenor* should assign a supervisor that can help and direct the project towards the right path while reviewing the work the students are doing.

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- *Kilkki Outi* for her help in giving us information about suitable properties and who to contact there and for her encouragements that kept us working
- *Carl Flygare* for his help giving us relevant literature and guiding us toward a suitable property
- *Mathilda Ogden* in her help in giving us advice and listening to our problems

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References

[1] J. Li, F. Liu, Z. Li, C. Shao and X. Liu, "Grid-side flexibility of power systems in integrating large-scale renewable: A critical review on concepts, formulations and solution approaches," Renewable & Sustainable Energy Reviews, 2018.

[2] R. Fakhry and R. Harding, "We Must Start Investing in Demand Flexibility Today," 14 January 2021. [Online]. Available: https://www.nrdc.org/experts/rachel-fakhry/we-must-start-investing-demand-flexibility-today. NRDC. Inc. 2021 [Accessed 16 May 2022].

[3] L. Dyab, L. Schumacher, E. Edfeldt and J. Bruce, "Lösningar för ökad flexibilitet i elsystemet - Möjligheter och utmaningar," Sweco, 2020.

[4] "EU-projektet CoordiNet," 25 April 2020. [Online]. Available: https://www.uppsala.se/kommun-och-politik/sa-arbetar-vi-med-olika-amnen/sa-arbetar-vi-med-miljo-och-klimat/eu-projektet-coordinet/. Uppsala Kommun 2020 [Accessed 16 May 2022].

[5] [Online]. Available: https://www.vattenfalleldistribution.se/. [Accessed 16 May 2022].

Special Permission needed to view the data taken from *Vattenfall Eldistribution AB*

[6] "Dimensionering, installation, mått och vikt," 20 October 2021. [Online]. Available: https://www.swegon.com/siteassets/_product-documents/air-handling-units/gold-version-f/general/_sv/gold_rx_f_dimensioning.pdf. Swegon AB 2021 [Accessed 16 May 2022].

[7] "FUNCTION MANUAL, INSTALLATION," 2004. [Online]. Available: https://www.swegon.com/siteassets/_product-documents/air-handling-units/gold-version-f/operation-and-maintenance/_en/goldskffi1.31.pdf. Swegon AB 2004 [Accessed 16 May 2022].

[8] "Tvättmaskin W575H, W575HLE," 13 May 2020. [Online]. Available: https://tools.electroluxprofessional.com/Mirror/Doc/ELS/PDS/PS_438919495SE_W575H_SE.pdf?version=1652713741. Electrolux AB 2020 [Accessed 16 May 2020].

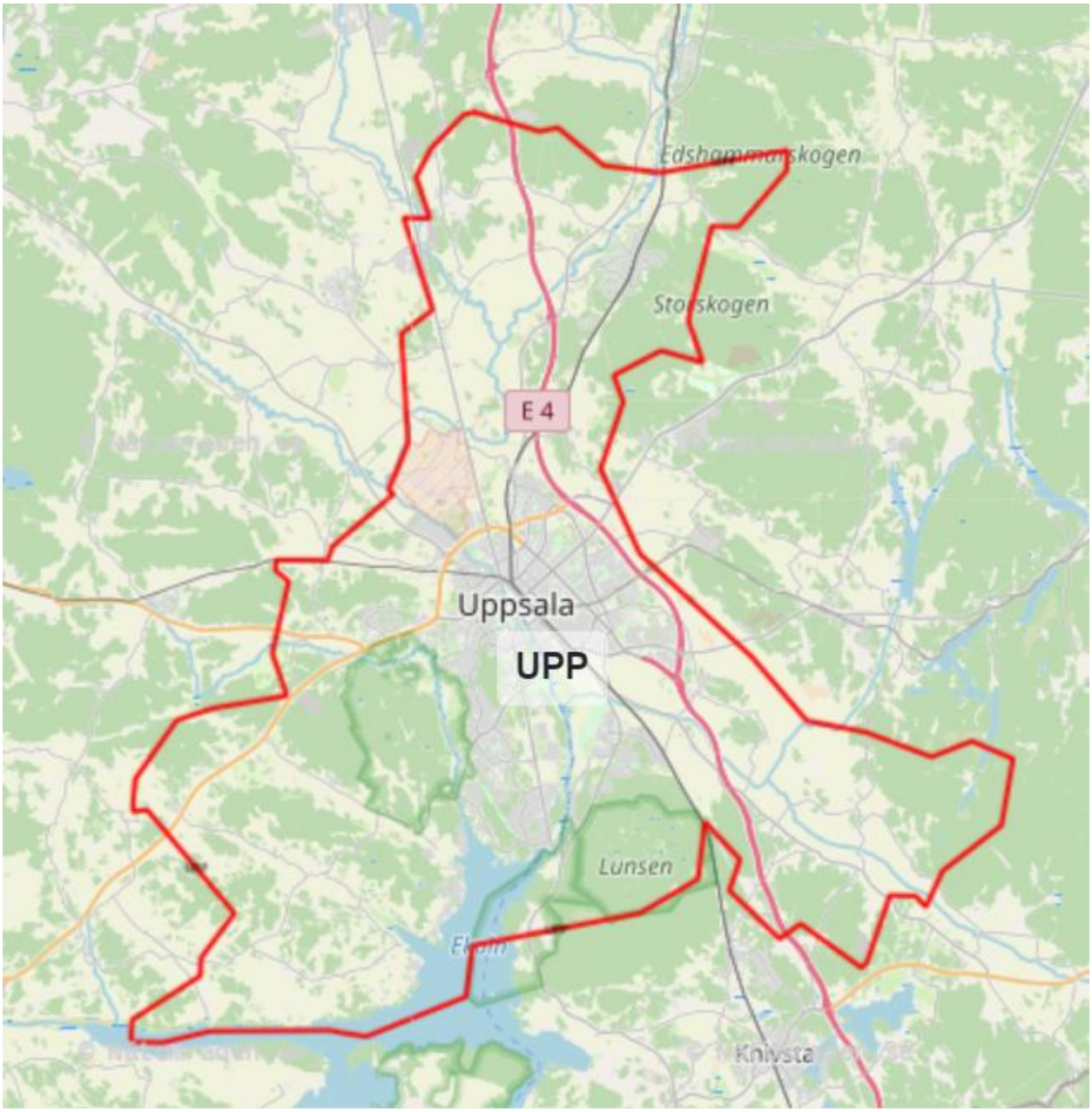
[9] "Torktumlare, T5190," 30 August 2017. [Online]. Available: https://www.soderkyl.se/wp-content/uploads/2019/03/torktumlare-t5190.pdf. Söderkyl AB 2017 [Accessed 16 May 2020].

[10] "Vision LED gen3.5," 14 January 2022. [Online]. Available: https://www.lighting.philips.se/api/assets/v1/file/PhilipsLighting/content/fp912300024648-pss-sv_se/912300024648_EU.sv_SE.PROF.FP.pdf. Philips Lightning AB 2022 [Accessed 16 May 2022].

Appendices

A1 – Uppsala UPP (map & Matlab code)

Illustration over the region in Uppsala where power consumption was recorded for the years 2018-2021:



- Data gathered for the power consumption between the years 2018-2021 for a region of Uppsala can't be shown here because it is more than 180 pages long.

Matlab code used to generate plots over Uppsala's power consumption for year 2018-2021:

```
% UPP_real_time är effektkonsumtion datan för Uppsala UPP tagen för varje timme i år
% 2018-2021. Dagseffekt är UPP_real_time men omstrukturerad som medelvärde av varje
% timme i år 2018-2021.

UPP_real_time;

UPP_real_time.active_power(1995, 1) = (109.4626+108.9818)/2;

UPP_real_time.active_power(1971, 2) = (103.7511+103.5614)/2;

UPP_real_time.active_power(2115, 3) = (117.7766+116.7935)/2;

UPP_real_time.active_power(2067, 4) = (108.3379+106.1207)/2;


data = load('UPP_real_time.mat');
yearIdx = 1; % Ändra till 2 för 2019, 3 för 2020 och 4 för 2021

% Dagsdata
dagseffekt = {};
dagseffekt.year = string(data.UPP_real_time.year_index(yearIdx));

% Samla datan för varje timme över alla dagar
for i = 1:length(data.UPP_real_time.active_power)
    h = mod(i, 24); % Timme på dygnet
    %h_text = string(h);
    h_idx = h+1;
    occurance = 1+floor(i/24);
    val = data.UPP_real_time.active_power(i, yearIdx);
    %if val ~= 0 % val not= 0, nollskilt
    dagseffekt.hours(h_idx) = h;
    dagseffekt.data(occurance, h_idx) = val;
    %end
end

dagseffekt;
save("dagseffekt.mat", "dagseffekt")

x = 0:1:23;
y = zeros(1,24);
for a = 1:1:24
    y(a) = sum(dagseffekt.data(:,a));
end

y = y./365;
bar(x,y)
xlim([0 23])
xticks([0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24])
ylim([0 180])

xlabel('Timmar')
ylabel('MWh')
title('Effektkonsumtion per timme för år 2018')
```

A2 – List of considered properties

Fastighetsnummer	Fastighetsbeteckning	Förvaltare	Adress	Populärnamn	Ägare av fastighet innan fusion/övergång
200200	BJÖRKLINGE 2:33	**Christoffer Törnqvist**	Södra Långåsvägen	Björklinge brandstation	FFAB
200300	BJÖRKLINGE-TIBBLE 5:31	**Christoffer Törnqvist**	Sandbrovägen 6	Bibliotek och familjedaghem	FFAB
401051	DANMARKS-SÄBY 6:5	**Jennie Norlén**	Almungevägen 33	Fyrislunds brandstation - Viktoria	Uppsala Kommun Industrihus Brand HB
201800	DRAGARBRUNN 25:1	**Erhard Meissner**	Vaksalagatan 15	Stadshuset	FFAB
200400	DRAGARBRUNN 3:1	**Jennie Norlén**	Svartbäcksgatan 32	Ungdomens hus	FFAB
200500	FJÄRDINGEN 16:2	**Jennie Norlén**	Sysslomansgatan 1	Walmstedtska gården	FFAB
200600	FJÄRDINGEN 27:11	**Christoffer Törnqvist**	Trädgårdsgatan 5 B	Grand	FFAB
200900	FLOGSTA 44:5	**Jennie Norlén**	Vänortsgatan 125	Ekeby/ Mässen	FFAB
201110	FLOGSTA 55:1	**Jennie Norlén**	Vänortsgatan 115-117,	Disponentvillan	FFAB
201120	FLOGSTA 55:1	**Jennie Norlén**	Vänortsgatan 119	Saruk terapilokal	FFAB
201130	FLOGSTA 55:1	**Jennie Norlén**	Vänortsgatan 121	Arbetsträning Caféverksamhet	FFAB
201140	FLOGSTA 55:1	**Jennie Norlén**	Vänortsgatan 123	Ekebyväg/terapilokal	FFAB
201700	FÅLHAGEN 4:6	**Erhard Meissner**	Vaksala torg 1, Stotgatan	UKK	FFAB
201200	GAMLA UPPSALA 24:17	**Christoffer Törnqvist**	Vattholmavägen 89	Gamla Uppsala brandstation	FFAB
201300	KÅBO 1:73	**Christoffer Törnqvist**	Kåbovägen 17	Skoghall	FFAB
401052	KÅBO 54:1	**Jennie Norlén**	Rosendalsvägen	Rosendals brandstation	Uppsala Kommun Industrihus Brand HB
201400	LILLA SLÄSSBO 1:181	**Christoffer Törnqvist**	Salavägen 22	Järlåsa Brandstation	FFAB
201500	LUTHAGEN 1:64	**Christoffer Törnqvist**	Kyrkogårdsgatan 35, Vasagatan	Biotopia	FFAB
201600	SKYTTORP 8:2	**Christoffer Törnqvist**	Flisvägen 2-6	Skyttorp brandstation	FFAB
201900	STORVRETA 47:277	**Christoffer Törnqvist**	Årentunavägen 2	Storvreta brandstation	FFAB
401053	ÄRNA 7:1	**Jennie Norlén**	Garnisionsvägen	Bärby brandstation	FFAB
200100	ALMUNGE-LÖVSTA 3:2	**Christoffer Törnqvist**	Brandstationsvägen 6	Almunge brandstation	FFAB
202000	SÄVJA 8:17	**Christoffer Törnqvist**	Källarbacksvägen 54	Cykelverkstaden	FFAB
0010 UTAB	BOLÄNDERNA 5:14	**Jennie Norlén**	Nymansgatan 6 och Bolandsgatan 10	Nymansgatan 6 och Bolandsgatan 10	AB Uppsala Kommuns Industrihus
1081 UTAB	BOLÄNDERNA 5:17	**Christoffer Törnqvist**	Fålhagsleden 59 och 61	Fålhagsl. 59 och 61	Uppsala Industrhus Cykeln AB
1083 UTAB	BOLÄNDERNA 5:18	**Christoffer Törnqvist**	Nymansgatan 8	Axfood, Nymansgatan 8	Uppsala Industrhus Cykeln AB
0038 UTAB	FÅLHAGEN 10:5	**Jennie Norlén**	Björkgatan 4	Björken	AB Uppsala Kommuns Industrihus
1070 UTAB	KUNGSÄNGEN 1:11	**Erhard Meissner**	Sågargatan 17	Kölen	Förvaltningsbolaget Industrihus Kölen KB
0019 UTAB	LIBROBÄCK 15:2	**Christoffer Törnqvist**	Skebogatan 8	Skebo 8 (mark)	AB Uppsala Kommuns Industrihus
0020 UTAB	LIBROBÄCK 15:3	**Christoffer Törnqvist**	Skebogatan 6	Skebo 6 (mark)	AB Uppsala Kommuns Industrihus
0037 UTAB	LIBROBÄCK 15:4	**Christoffer Törnqvist**	Skebogatan 2	Skebo 2	AB Uppsala Kommuns Industrihus
0013 UTAB	LIBROBÄCK 6:1	**Christoffer Törnqvist**	Skebogatan 1-5	Skebo 1-5	AB Uppsala Kommuns Industrihus
0014 UTAB	LIBROBÄCK 6:2	**Christoffer Törnqvist**	Skebogatan 7	Skebo 7 (mark)	AB Uppsala Kommuns Industrihus
0004 UTAB	ÅRSTA 76:1	**Christoffer Törnqvist**	Sylveniusgatan 8	Sylveniusgatan (Allis, Alma + industri)	AB Uppsala Kommuns Industrihus
101000	Almungeberg 1:17	**Magnus Pettersson**		Almunge sim-och sporthall	UKSR AB
102000	Snugga 1:7	**John Hamberg (Malin Hällkvist FL)**		Björkvallen IP	UKSR AB
104000	Backa 1:11	**John Hamberg (Malin Hällkvist FL)**		Vattholma IP	UKSR AB
105000	Berthåga 13:1	**John Hamberg (Malin Hällkvist FL)**		Berthåga IP	UKSR AB
173000	Berthåga 45:4	**Ann-Kristin Volby**		Stenhagens konstgräs	UKSR AB
106000	Björklinge-Tibble 2:34	**John Hamberg (Malin Hällkvist FL)**		Sandviksbadet	UKSR AB
108000	Bälinge-Ekeby 1:18	**John Hamberg (Malin Hällkvist FL)**		Bälingebadet	UKSR AB
107000	Bälinge 1:18	**John Hamberg (Malin Hällkvist FL)**		Bälinge IP	UKSR AB
109000	Ekebyboda 1:2	**Magnus Pettersson**		Ekebyboda skyttecentrum	UKSR AB
110000	Fjällnora 2:4	**Magnus Pettersson**		Fjällnora	UKSR AB
111000	Fjärdingen 1:2	**Ann-Kristin Volby**		Gula Villan	UKSR AB
112000	Fjärdingen 1:2	**Ann-Kristin Volby**		Parksnäckan	UKSR AB
114000	Flogsta 11:71	**Magnus Pettersson**		UIF-villan	UKSR AB
115000	Kåbo 69:1	**Magnus Pettersson**		Ekebyvallen	UKSR AB
116000	Fålhagen 71:1	**Magnus Pettersson**		Fålhagens IP	UKSR AB
117000	Fålhagen 1:38	**Ann-Kristin Volby**		Österängen IP	UKSR AB
118000	Gamla Uppsala 21:29	**Magnus Pettersson**		Röbo tegelbruk	UKSR AB
119000	Gamla Uppsala 27:20	**Magnus Pettersson**		Gamla Uppsala sporthall	UKSR AB
123000	Gränby 11:29;11:34:11,36	**John Hamberg (Malin Hällkvist FL)**		Gränby sportfält	UKSR AB
171000	Gränby friidrott, (se ovan,del av Gränby 11:29)	**John Hamberg (Malin Hällkvist FL)**		Gränby friidrott	UKSR AB
121000	Grönviken 1:4	**Ann-Kristin Volby**		Rörken	UKSR AB
175000	Kronåsen 2:1	**Donna Sidera (Matilda Frej FL)**		Studenternas	UKSR AB
176000	Kronåsen 2:1	**Donna Sidera (Matilda Frej FL)**		Kommersiella lokaler, hus F	UKSR AB
177000	Kronåsen 2:1	**Donna Sidera (Matilda Frej FL)**		Studenternas bandy	UKSR AB
178000	Kronåsen 2:1	**Donna Sidera (Matilda Frej FL)**		Studenternas KAP	UKSR AB
179000	Kronåsen 2:1	**Donna Sidera (Matilda Frej FL)**		Studenternas VIP/konferens	UKSR AB
134000	Kvarngärdet 1:32	**Ann-Kristin Volby**		Anders Diöshallen, Lötens sportfält	UKSR AB
138000	Lilla Väsby 1:35	**Magnus Pettersson**		Gullhagens IP	UKSR AB
140000	Löten 11:17	**Magnus Pettersson**		Garage/Förråd Löten	UKSR AB
142000	Rosenbacka 2:2	**Ann-Kristin Volby**		Järlåsa IP	UKSR AB
143000	Storvreta 36:4	**John Hamberg (Malin Hällkvist FL)**		Skogsvallens fotbollsplan	UKSR AB
172000	Storvreta 4:79	**John Hamberg (Malin Hällkvist FL)**		Storvreta sporthallar	UKSR AB
145000	Sunnersta 168:2	**Ann-Kristin Volby**		Villa Fristaden	UKSR AB
148000	Sunnersta 51:137	**Ann-Kristin Volby**		Kanothus	UKSR AB
149000	Sunnersta 51:138	**Ann-Kristin Volby**		Granebergs camping	UKSR AB
150000	Sunnersta 51:137	**Ann-Kristin Volby**		Lyssnaängens badplats	UKSR AB
146000	Sunnersta 51:97	**Ann-Kristin Volby**		Sunnerstaåsen, raststugan mm	UKSR AB
147000	Sunnersta 80:7	**Ann-Kristin Volby**		Sunnersta IP	UKSR AB
154000	Sävja 1:89	**Ann-Kristin Volby**		Sävja IP	UKSR AB
155000	Sävja 1:90	**Ann-Kristin Volby**		Scoutgård Näntuna	UKSR AB
160000	Ulva 1:2	**John Hamberg (Malin Hällkvist FL)**		Ulva kvarn	UKSR AB
174000	Vaksala-Lunda 1:50	**Magnus Pettersson**		Lindbackens idrottshall	UKSR AB
162000	Valsätra 57:1 + 57:2	**Ann-Kristin Volby**		Valsätra IP	UKSR AB, vi äger inte 57:1 men förvaltar
163000	Vattholma 5:321	**John Hamberg (Malin Hällkvist FL)**		Vattholma sporthall	UKSR AB
164000	Viksta 1:3	**John Hamberg (Malin Hällkvist FL)**		Viksta IP	UKSR AB
165000	Vårdsätra 11:21	**Magnus Pettersson**		Lurbo ridklubb	UKSR AB
166000	Vänge-Väsby 1:42	**Ann-Kristin Volby**		Vänge IP	UKSR AB
167000	Åkerlänna 8:1	**John Hamberg (Malin Hällkvist FL)**		Åkerlänna IP	UKSR AB
168000	Årsta 11:132	**Magnus Pettersson**		Årsta IP	UKSR AB
170000	Öster-Edinge 4:21	**Magnus Pettersson**		Testenbadet	UKSR AB
300000	Fyrishov	**Kurt Geschwindt**		Fyrishov	Fyrishov AB
202100	Almunge-Lövsta 2:122	**Christoffer Törnqvist**		Almunge - under prod. ny brandstation	FFAB
0016 UTAB	LIBROBÄCK 13:3	**Hanna Ljungberg**		Vira	AB Uppsala Kommuns Industrihus
0041 UTAB	LIBROBÄCK 13:5	**Hanna Ljungberg**		Krux	Q-med/Galderma
0029 UTAB	LIBROBÄCK 14:2	**Hanna Ljungberg**		Byggbiten	AB Uppsala Kommuns Industrihus
0018 UTAB	LIBROBÄCK 14:3	**Hanna Ljungberg**		Sem 30	AB Uppsala Kommuns Industrihus
0032 UTAB	LIBROBÄCK 7:4	**Hanna Ljungberg**		Sem 33C	AB Uppsala Kommuns Industrihus
0031 UTAB	LIBROBÄCK 7:5	**Hanna Ljungberg**		Sem 33A+B	AB Uppsala Kommuns Industrihus

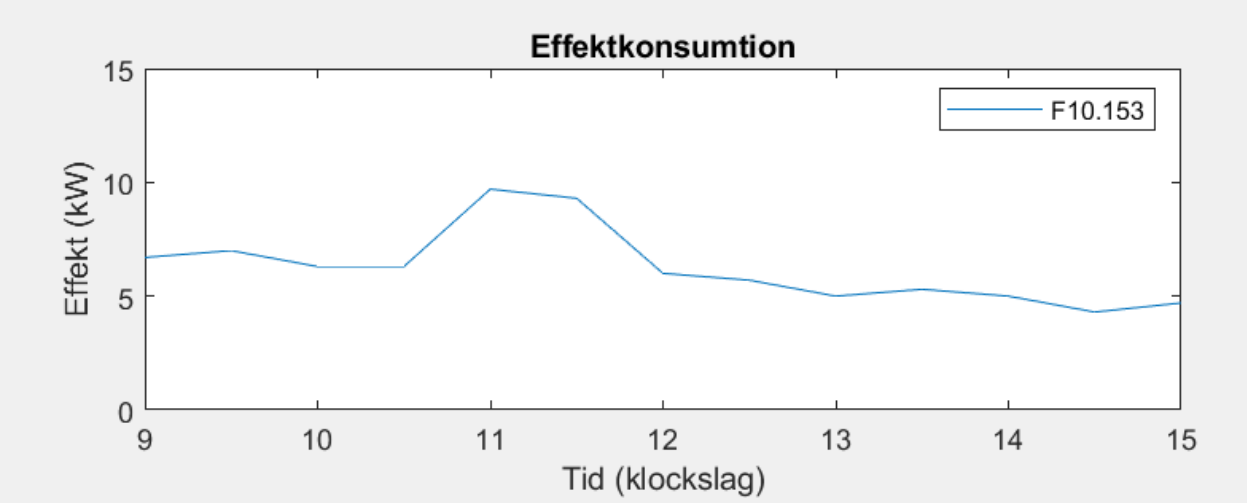
A3 – Data that cannot be used as flexibility resources

The following pages will include plots and description of locations that couldn't be used as flexibility resources due to different reasons.

A3.1 Basement Floor (classified as F10)

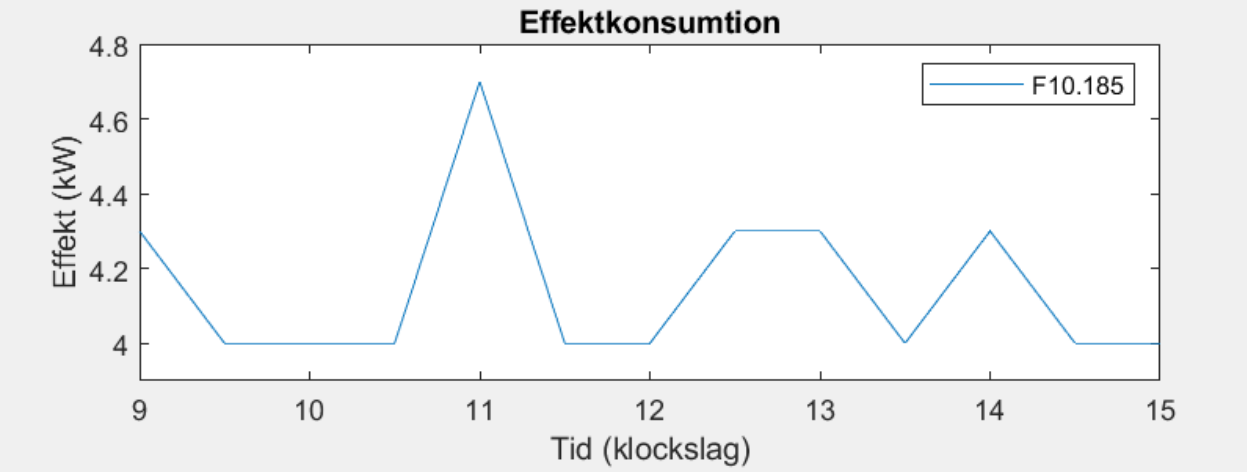
F10.153

F10.153 displays power and energy consumed in the VIP-lounge located in floor 2 and if we look at the following figure, we can see that between 10:30 and 11:30 is a peak in the power consumed.



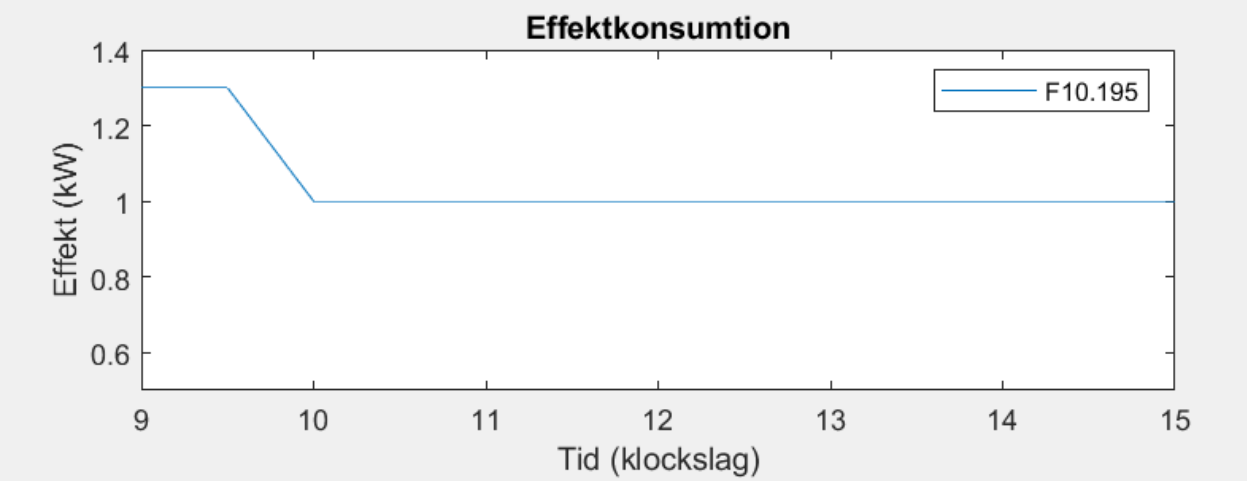
F10.185

F10.185 is located on the basement floor but no information can be found on where or what F10.185 is. F10.185 draws a mean of 4.2 kW between the hours 9-15 on a span of three days, as seen in the following figure.



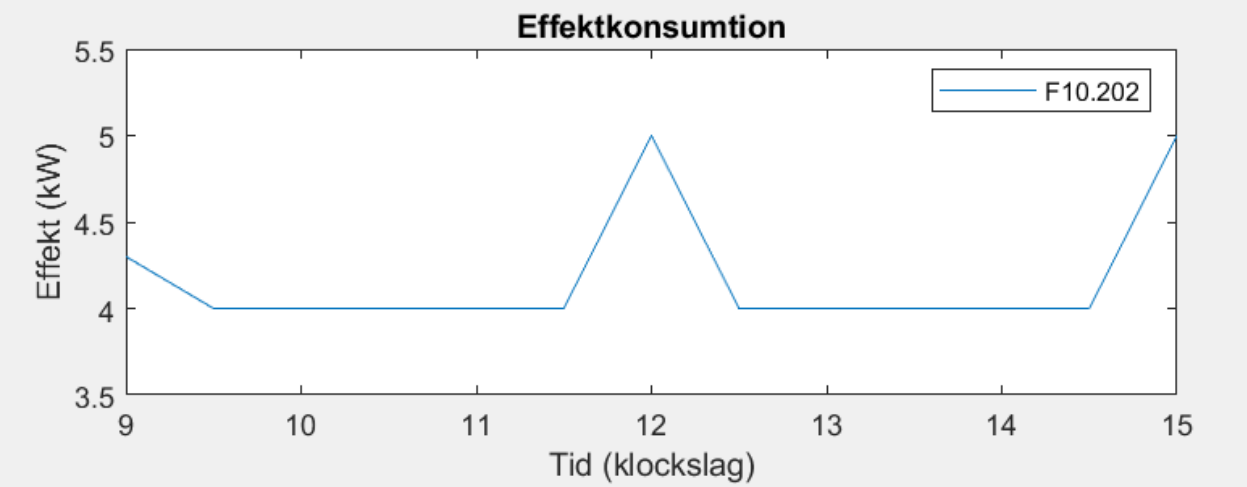
F10.195

F10.195 is an electrical box that supplies power to the locations in the region labeled B311-T2-N3A3 in the drawings for the basement floor. The following figure shows how much power F10.195 is drawing between 9-15.



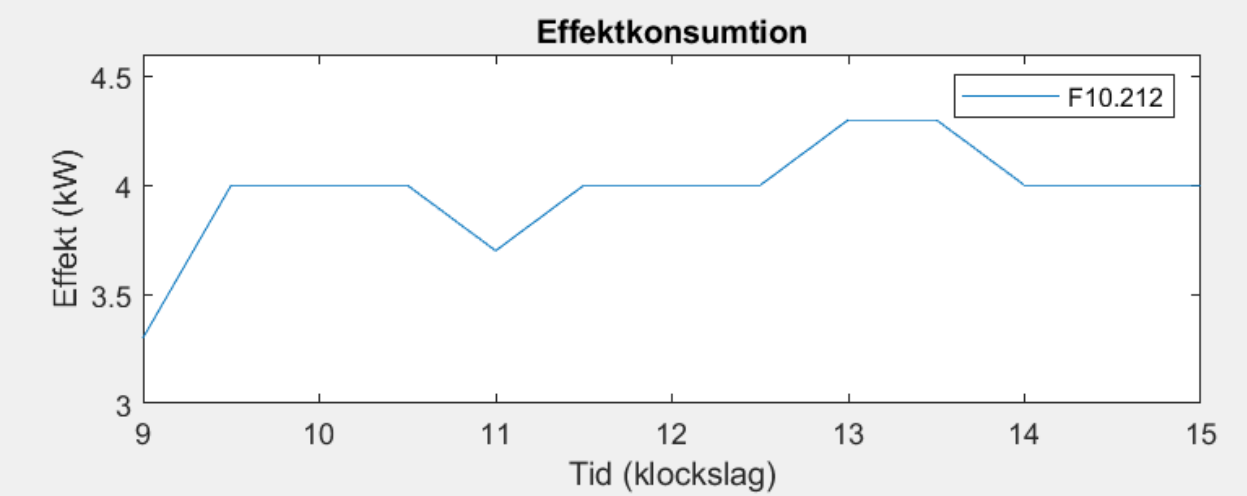
F10.202

F10.202 is an electrical box & ventilation recess station that supplies power to the region labeled B311-T2-N4A2 in the drawings for the basement floor. The station draws a mean of 4.2kW as seen in the following figure.



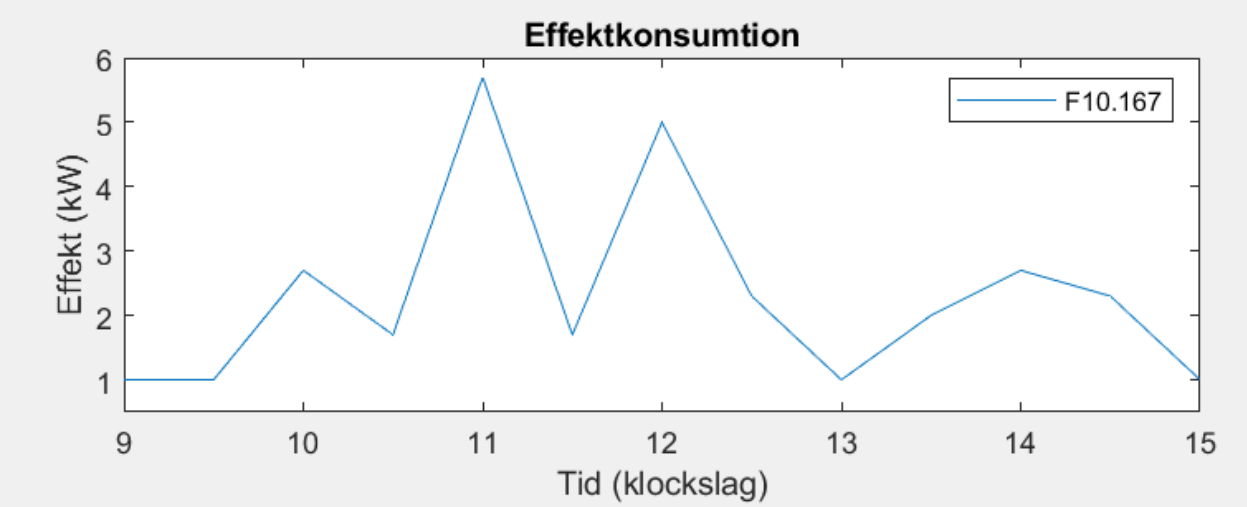
F10.212

Is an electrical box located in the basement floor and supplies power to the region labeled B311-T2-N5A4 in the drawings for the basement floor. The following figure shows the boxes power activity between the hours 9-15.



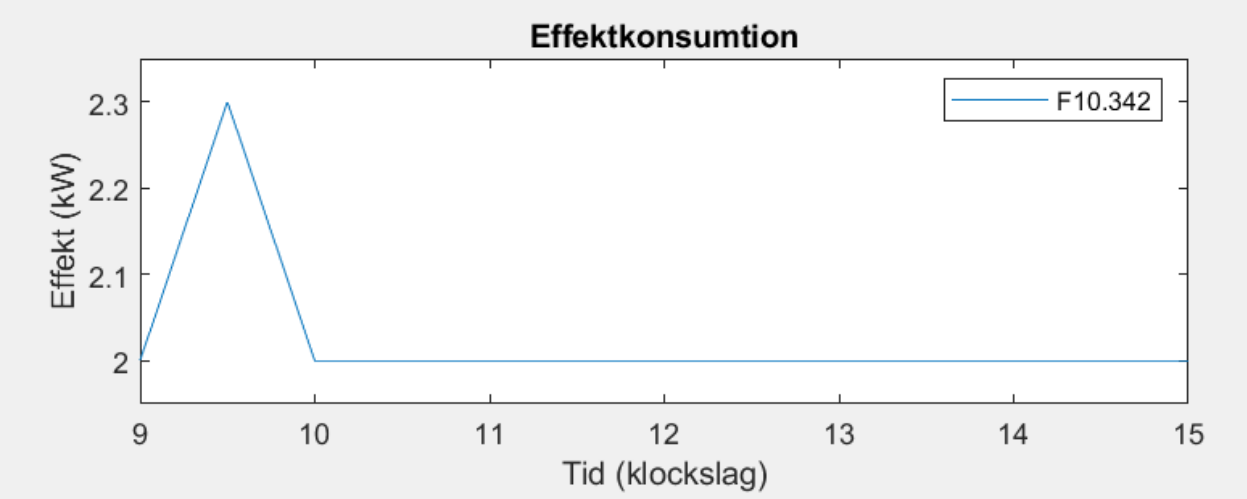
F10.167

F10.167 is located on the basement floor but no information can be found on where or what F10.167 is. The place draws a mean of 2.3 kW between the hours 9-15 on a span of three days, as seen in the following figure.



F10.342

Is an electrical box that supplies power to the corporation *Brasseri21*. The box consumed a mean of 2.0kW between the hours 9-15 as seen in the following figure.

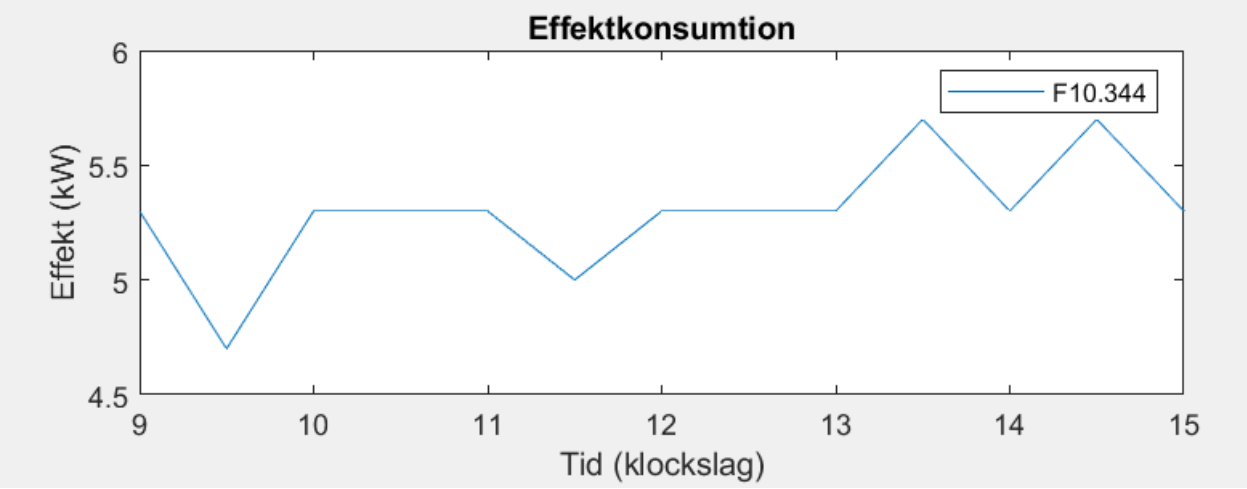


F10.343

Is an electrical box located in the basement floor and supplies power to the ventilation systems of the corporation *Brasseri21*.

F10.344

Is an electrical box that supplies power to the region labeled B311-T1-N55A2 in the drawings for the basement floor. The electrical box consumed a mean of 5.3kW.



F10.003

Is the subcenter responsible for supplying power to, for instance, the ground heat. F10.003 supplies power for the region labeled B311-T1-N51A3 of the drawings for the basement floor. The center draws a mean of 1.5kW.

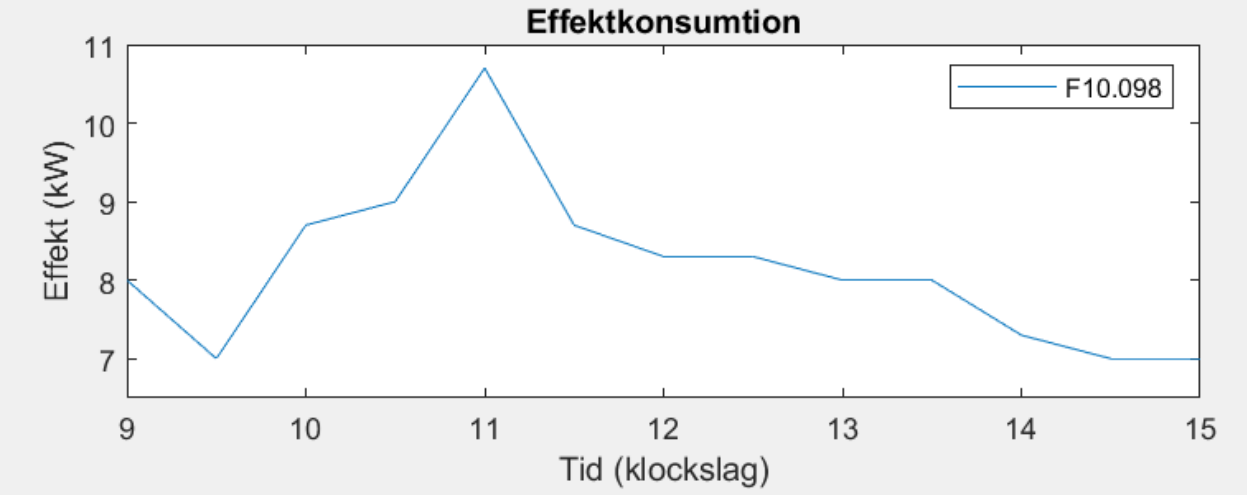
F10.291
Is an electrical box that supplies power to the regions B311-T1-N76RB16, B311-T1-N45A1 and B311-T1-N45A2 of the basement floor. F10.291 draws a mean of 1.3kW.

F10.031
F10.031 is located on the basement floor but no information can be found on where or what F10.031 is. The place draws a mean of 0.08 kW between the hours 9-15 on a span of three days.

F10.157
F10.157 supplies power to the workspace for media. The station draws a constant 1kW power over the span of three days.

F10.018
F10.018 supplies power to the *Studenternas* different desks, offices, and typewriters. The station draws a mean of 0.05kW over the span of three days.

F10.098
Is an electrical box that supplies power to the region labeled B311-T1-N76RB3 in the drawings for the basement floor. The electrical box consumed a mean of 8.2kW.



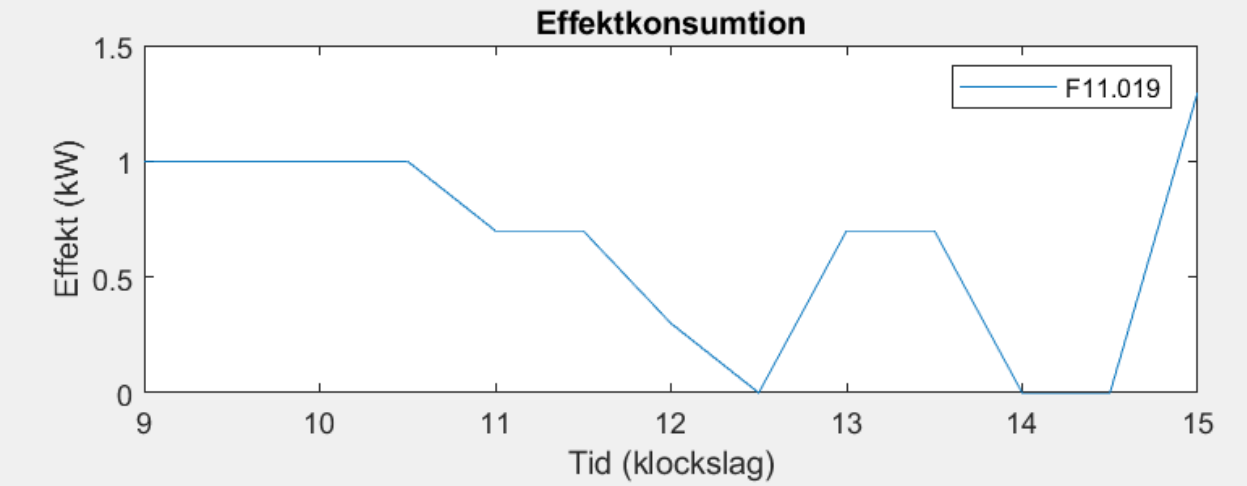
F10.219
F10.219 is located on the third floor but no information can be found on where or what F10.219 is. The place draws a mean of 0.1kW as can be seen in the following figure.

F10.156
F10.156 is what's known as the UPS room. An essential electrical box that supplies power to all other electrical boxes in the facility. The place consumes a constant 9kW power between the hours 9-15 on a span of three days.

A3.2 First Floor (classified as F11)

F11.019

Is an electrical box that supplies power to the region labeled B311-T1-N64A1 of the drawings for the first floor. It draws a mean of 0.64kW and its activity can be seen in the following figure.

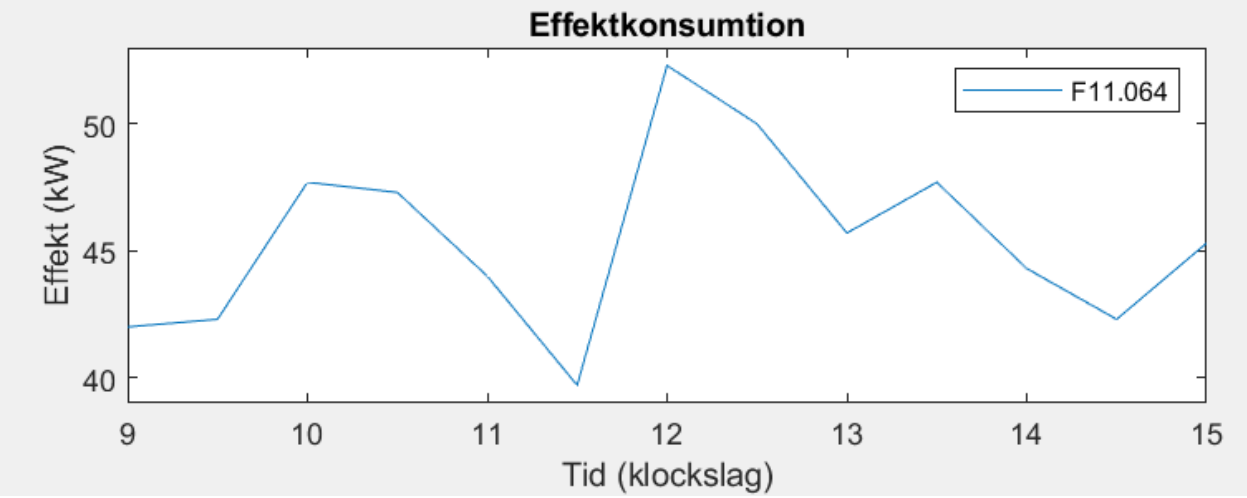


F11.120

F11.120 is located on the first floor but no information can be found on where or what F11.120 is. The place draws 0kW.

F11.064

Is an electrical box that supplies power to the region labeled B311-T1-N76RB21 of the drawings for the first floor. Its power activity can be seen in the following figure.



F11.013

Is an electrical box that didn't consume any power.

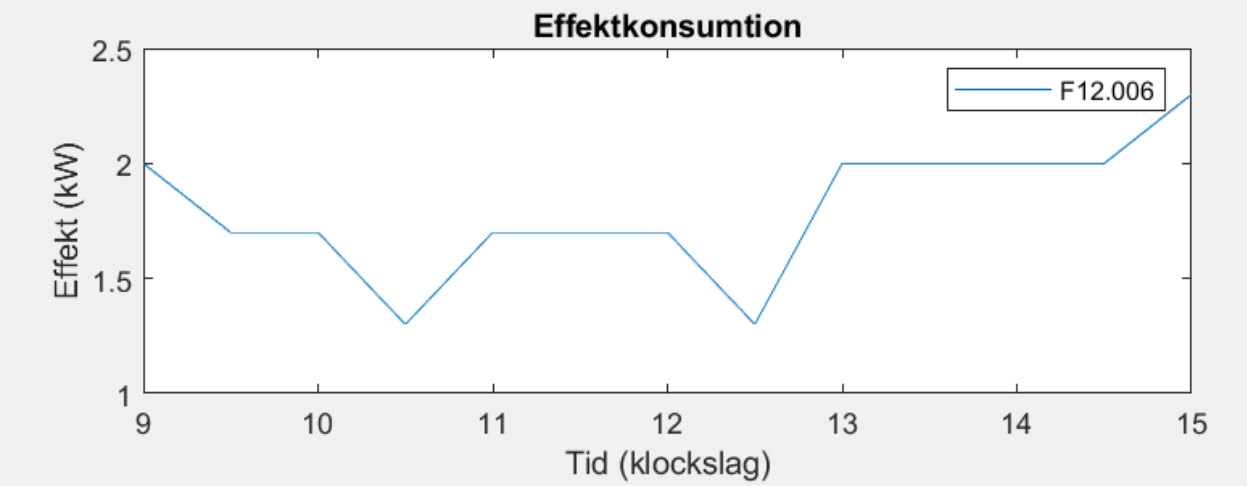
F11.151

Is an electrical box that supplies power to the region labeled B311-T1-N74A1 of the drawings for the first floor. The box draws 0kW.

A3.3 Second Floor (classified as F12)

F12.006

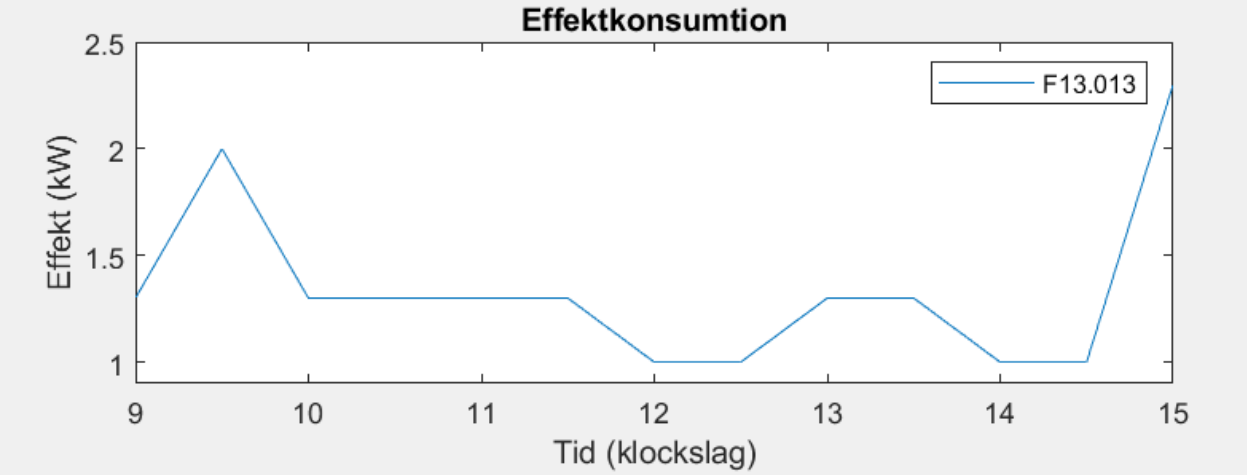
Located on the second on the second floor but no information can be found on where or what F12.006 is. The power activity of F12.006 can be seen in the following figure.



A3.4 Third Floor (classified as F13)

F13.013

F13.013 is located on the third floor but no information can be found on where or what F13.013 is. The place draws a mean of 1.4kW as can be seen in the following figure.



A3.5 Fifth Floor (classified as F15)

F15.001

F15.001 is located on the fifth floor but no information can be found on where or what F15.001 is. The place draws 0kW.

A3.6 Seventh Floor (classified as F17)

F17.013

According to documentation, this meter will show the power activity of future photovoltaic systems.

A3.7 Places with no information about location

N57

N57 is a reserve tv-buss that wasn't used during the time of manual readings.

A4 – Drawings for floor F10-F17 of Studenternas

The drawings are 17 pages long and will be attached with the report.

A5 – Data taken from the distribution center

The data is gathered in a 31 pages long PDF so it will be attached with the report.

A6 – Matlab code used to plot the data from Appendix A5

```
% skripten ska plotta data som samlades manuellt mellan den 27-29 april
% för följande lokaler:

%% Lokal F10.153 % Ta med
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [6.7 7 6.3 6.3 9.7    9.3 6 5.7 5 5.3 5 4.3 4.7];
y2 = [50829  50830 50834.3 50835.7 50840.7 50842.3 50846.3 50848 50851.3 ...
    50851.3 50857 50858 50862];
figure(1)
subplot(2, 1, 1), plot(x, y1), legend('F10.153')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([0 15])
subplot(2, 1, 2), plot(x, y2), legend('F10.153')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')
ylim([5.08 5.09]*10^4)

%% Lokal F10.185
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [4.3 4 4 4 4.7 4 4 4.3 4.3 4 4.3 4 4];
y2 = [100053.7 100054 100056.3 100058.7 100061.3 100062.7 100066.3 ...
    100067.7 100070 100070 100075 100076.3 100079];
figure(2)
subplot(2, 1, 1), plot(x, y1), legend('F10.185')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([3.9 4.8])
subplot(2, 1, 2), plot(x, y2), legend('F10.185')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')
ylim([100053 100080])

%% Lokal F10.195
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [1.3 1.3 1 1 1 1 1 1 1 1 1 1 1];
y2 = [36015  36015.3 36016 36016.3 36016.7 36017.3 36018.3 36018.3 ...
    36019.3 36019.3 36020.3 36020.3 36021.3];
figure(3)
subplot(2, 1, 1), plot(x, y1), legend('F10.195')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([0.5 1.4])
subplot(2, 1, 2), plot(x, y2), legend('F10.195')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')
```

```
%% Lokal F10.202
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [4.3 4 4 4 4 4 5 4 4 4 4 4 5];
y2 = [111791 111791.7 111792.7 111794.3 111798.3 111799.7 111802.7 ...
    111804.3 111807 111807 111811 111812.3 111815.7];
figure(4)
subplot(2, 1, 1), plot(x, y1), legend('F10.202')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([3.5 5.5])
subplot(2, 1, 2), plot(x, y2), legend('F10.202')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')

%% Lokal F10.212
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [3.3 4 4 4 3.7 4 4 4 4.3 4.3 4 4 4];
y2 = [92033  92033.7      92036 92037.3 92039.7 92041 92043.7    92045 92048.7 ...
    92048.7 92051.7 92053 92055.3];
figure(5)
subplot(2, 1, 1), plot(x, y1), legend('F10.212')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([3 4.6])
subplot(2, 1, 2), plot(x, y2), legend('F10.212')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')

%% Lokal F14.018 % Ta med
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [5.7 4.3 3 3 2 2 2 2 2 2 2 2 1.7];
y2 = [44026.33333 44027.3 44032.3      44033 44035 44035.7 44037 44037.3 ...
    44039 44039 44040.3 44040.3 44042.3];
figure(6)
subplot(2, 1, 1), plot(x, y1), legend('F14.018')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([1 6])
subplot(2, 1, 2), plot(x, y2), legend('F14.018')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')

%%  Lokal F10.094 % Ta med
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [0.7 1.3 1.3 0 0 0 0.7      0.7 0 0 0 0 0];
y2 = [12036  12036 12036.7 12037.3 12037.3 12037.3 12038 12038 12038.3 ...
    12038.3 12038.3 12038.3 12038.3];
figure(7)
subplot(2, 1, 1), plot(x, y1), legend('F10.094')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([0 1.5])
subplot(2, 1, 2), plot(x, y2), legend('F14.094')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')
```

```
%% Lokal F14.002 % Ta med
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [20.7 20 20 21.3 20.7 20 21.7 21.3 19.3 21 22 21.3 19.7];
y2 = [244528.7 244533 244544 244551.3 244555.3 244570 244584 244591 ...
    244605 244605 244625.3 244632.7 244645.7];
figure(8)
subplot(2, 1, 1), plot(x, y1), legend('F14.002')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([19 23])
subplot(2, 1, 2), plot(x, y2), legend('F14.002')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')

%% Lokal F10.155 % Ta med
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [6.7 5 6.3    4.3    4.7 4 6.7 4.7 4.3 5.7 5 4.7 4.3];
y2 = [51487.7 73622 73624.3 73626.3 73630 73631.3 73634.7 73636.3 73640 ...
    73640 73645 73646.7 73650];
figure(9)
subplot(2, 1, 1), plot(x, y1), legend('F10.155')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([3.9 7])
subplot(2, 1, 2), plot(x, y2), legend('F10.155')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')

%% Lokal F10.162 % Ta med
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [1      1.3 1 1 1 1 1 1 1 1 1 1 1];
y2 = [13410  13411 13411.3 13411.3 13411.7 13411.7 13412 13411.7  13412 ...
    13412 13412 13412 13412.3];
figure(10)
subplot(2, 1, 1), plot(x, y1), legend('F10.162')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([0.5 1.5])
subplot(2, 1, 2), plot(x, y2), legend('F10.162')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')

%% Lokal F10.167
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [1      1 2.7 1.7 5.7 1.7 5 2.3   1 2 2.7      2.3    1];
y2 = [10134  10134 10134.7 10136 10139.3 10141 10143 10144.3 10146.3 ...
    10146.3 10148 10149.3 10150.3];
figure(11)
subplot(2, 1, 1), plot(x, y1), legend('F10.167')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([0.5 6])
subplot(2, 1, 2), plot(x, y2), legend('F10.167')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')
```

```
%% Lokal F10.006 % Ta med
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [12.7 14.3 13.7 13.3 12.7 12 10.7 10.7 11.3 10.3 10.7 11 11];
y2 =[198880.3 198883.3 198890.3 198895 198903.7 198907.3 198916.3 198920 ...
    198927.3 198927.3 198938 198941.7 198948.3];
figure(12)
subplot(2, 1, 1), plot(x, y1), legend('F10.006')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([10 15])
subplot(2, 1, 2), plot(x, y2), legend('F10.006')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')

%% Lokal F10.342
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [2      2.3 2 2 2 2 2 2 2 2 2 2 2];
y2 = [36429.7 36430.3 36431.3 36432 36466.7 36433.7 36434.7 36435.3 ...
    36436.3 36436.3 36438.3 36439 36440];
figure(13)
subplot(2, 1, 1), plot(x, y1), legend('F10.342')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([1.95 2.35])
subplot(2, 1, 2), plot(x, y2), legend('F10.342')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')

%% Lokal F10.343
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [4.3 4.3 5 4.7 6.7    6.7    8 8.7 6.7 6.3 5.3 5.7 3.3];
y2 = [85591.3 85592 85594.7      85596.7      85933.3 85601 85606.7 85609 85614.3 ...
    85614.3 85620.3 85622 85624.7];
figure(14)
subplot(2, 1, 1), plot(x, y1), legend('F10.343')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([3 9])
subplot(2, 1, 2), plot(x, y2), legend('F10.343')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')
ylim([8.550 8.6]*10^4)

%% Lokal F10.344
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [5.3 4.7 5.3 5.3 5.3 5 5.3 5.3 5.3 5.7 5.3 5.7 5.3];
y2 = [86672.3 86673.7 86676      86679 86681.3 86682.3 86686.3 86688.3 ...
    86691.7 86691.7 86695.3 86697.7 86702.3];
figure(15)
subplot(2, 1, 1), plot(x, y1), legend('F10.344')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([4.5 6])
subplot(2, 1, 2), plot(x, y2), legend('F10.344')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')
```

```
%% Lokal F12.006
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [2      1.7    1.7    1.3    1.7    1.7    1.7    1.3 2 2 2 2 2.3];
y2 = [34452  34452.3      34453.7      34454 34455  34456 34457  34457.7
       34458.7      ...
    34458.7  34459.7      34460.7      34461.3];
figure(16)
subplot(2, 1, 1), plot(x, y1), legend('F12.006')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([1 2.5])
subplot(2, 1, 2), plot(x, y2), legend('F12.006')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')

%% Lokal F10.003
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 0135, 14, 14.5, 15];
y1 = [0      0 0    0 9.3 0 0 0  10.3 0 0 0 0];
y2 = [2145 2145     2145 2145 2145.3 2146 2147.3 2147.3 2147.3 2147.3 ...
    2148.7 2148.7 2148.7];
figure(17)
subplot(2, 1, 1), plot(x, y1), legend('F10.003')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([0 11.5])
subplot(2, 1, 2), plot(x, y2), legend('F10.003')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')
ylim([2144 2150])

%% Lokal F11.019
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [1      1 1    1 0.7 0.7 0.3 0     0.7    0.7    0 0    1.3];
y2 = [38022.338022.7      38023 38023  38023.3      38023.3      38023.7
       38023.7      ...
    38024.3  38024.3      38025.7      38025.7      38026.7];
figure(17)
subplot(2, 1, 1), plot(x, y1), legend('F11.019')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([0 1.5])
subplot(2, 1, 2), plot(x, y2), legend('F11.019')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')

%% Lokal F10.291
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [2      1 1.3 1      1 1    1 1.3 1.3 1.7 1.3 1 1.3];
y2 = [19665  19665.7      19666.3      19666.7      19667.7      19668 19669
       19669.7      ...
    19670.7  19670.7      19671.7      19672 19672.3];
figure(18)
subplot(2, 1, 1), plot(x, y1), legend('F10.291')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([0.5 2.5])
subplot(2, 1, 2), plot(x, y2), legend('F10.291')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')
```

```
%% Lokal F10.031
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [0.3 0.3 0     0 0    0 0.3 0 0 0 0 0 0];
y2 = [3119 3119     3119 3119.3  3119.3 3119.3 3120 3120   3120 3120 3120.3 3120.3
3120.3];
figure(19)
subplot(2, 1, 1), plot(x, y1), legend('F10.031')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([0 0.4])
subplot(2, 1, 2), plot(x, y2), legend('F10.031')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')

%% Lokal F10.157
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [1      1 1 1 1 1 1 1 1 1 1 1 1];
y2 = [8852.7 8852.7 8853.3 8853.7 8854.3 8854.3      8855.3 8856  8856.7 ...
    8856.7 8857.7 8858 8858.7];
figure(20)
subplot(2, 1, 1), plot(x, y1), legend('F10.157')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([0.9 1.1])
subplot(2, 1, 2), plot(x, y2), legend('F10.157')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')

%% Lokal F11.120
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [0      0 0    0 0    0 0    0 0    0 0    0 0];
y2 = [1524 1524     1524 1524 1524 1524 1524 1524 1524 1524 1524 1524 1524];
figure(21)
subplot(2, 1, 1), plot(x, y1), legend('F11.120')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
subplot(2, 1, 2), plot(x, y2), legend('F11.120')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')

%% Lokal F10.311 % Ta med
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [23.3 39 60.3 40.7   46 30.7      51.3 47.3 31 32.7 29 35   27];
y2 = [246186.7 246193.3   246217.3 246230.3 246256.3 246267 246290 ...
    246305.3 246332.7 246332.7   246370 246380.7     246395.3];
figure(22)
subplot(2, 1, 1), plot(x, y1), legend('F10.311')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([20 65])
subplot(2, 1, 2), plot(x, y2), legend('F10.311')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')
```

```
%% Lokal F11.064
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [42 42.3 47.7 47.3   44 39.7      52.3 50      45.7 47.7 44.3 42.3 45.3];
y2 = [476723.7 476731.3   476758.3 476766 476798 476817 476848.3 476865 ...
    476896.3 476896.3 476943 476958    476987.7];
figure(23)
subplot(2, 1, 1), plot(x, y1), legend('F11.064')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([39 53])
subplot(2, 1, 2), plot(x, y2), legend('F11.064')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')

%% Lokal F10.018
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [0      0 0 0 0 0 0.3 0.3 0 0 0 0 0];
y2 = [351 351 351.3 351.3 351.7  351.7 351.7  352    352    352    352    352    352];
figure(24)
subplot(2, 1, 1), plot(x, y1), legend('F10.018')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([0 0.35])
subplot(2, 1, 2), plot(x, y2), legend('F10.018')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')
ylim([350.9 352.1])

%% Lokal F10.098
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [8      7 8.7 9      10.7 8.7 8.3 8.3 8 8 7.3 7 7];
y2 = [110746.3 110747.3   110752.3 110754.3 110762.3 110766.3333 110771.3 ...
    110773.7 110779.3 110779.3 110787 110789 110793.7];
figure(25)
subplot(2, 1, 1), plot(x, y1), legend('F10.098')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([6.5 11])
subplot(2, 1, 2), plot(x, y2), legend('F10.098')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')

%% Lokal F11.013
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [0      0 0 0 0 0 0 0 0 0 0 0 0];
y2 = [13210.3 13210.3 13210.3 13210.3 13210.7 13210.7 13210.7 13211     ...
    13211 13211     13211 13211  13211];
figure(26)
subplot(2, 1, 1), plot(x, y1), legend('F11.013')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
subplot(2, 1, 2), plot(x, y2), legend('F11.013')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')
```

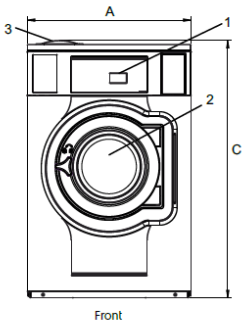
```
%% Lokal F15.001
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [0      0 0 0 0 0 0 0 0 0 0 0 0];
y2 = [108048.3 108048.3 108048.3 108048.3 108048.3 108048.3 108048.3 ...
    108048.3 108048.3 108048.3 108048.3 108048.3 108048.3 108048.3];
figure(27)
subplot(2, 1, 1), plot(x, y1), legend('F15.001')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
subplot(2, 1, 2), plot(x, y2), legend('F15.001')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')

%% Lokal F13.013
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [1.3 2  1.3    1.3    1.3    1.3    1 1    1.3    1.3    1 1    2.3];
y2 = [42422  42422.3      42423 42463.3 42463.7 42463.7 42464.3 42464.3 42465 ...
    42465 42465.3 42465.3 42467];
figure(28)
subplot(2, 1, 1), plot(x, y1), legend('F13.013')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([0.9 2.5])
subplot(2, 1, 2), plot(x, y2), legend('F13.013')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')

%% F11.151
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [0      0 0 0 0 0 0 0 0 0 0 0 0];
y2 = [92399.7 92399.7 92399.7 92399.7 92399.7 92399.7 92399.7 92399.7 ...
    92399.7 92399.7 92399.7 92399.7 92399.7];
figure(29)
subplot(2, 1, 1), plot(x, y1), legend('F11.151')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
subplot(2, 1, 2), plot(x, y2), legend('F11.151')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')

%% F10.219
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [0.3 0.3 0     0 0.3 0.3 0  0 0    0 0    0 0];
y2 = [131827 131827 131829.3 131829.3 131829.3 131829.3 131829.7 ...
    131829.7 131829.7 131829.7   131829.7 131829.7 131829.7];
figure(30)
subplot(2, 1, 1), plot(x, y1), legend('F10.219')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([0 0.35])
subplot(2, 1, 2), plot(x, y2), legend('F10.219')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')
```

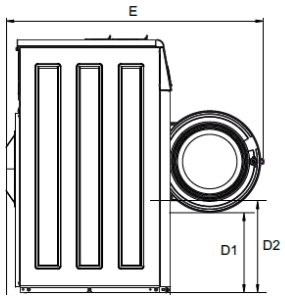
```
%% F10.156
x = [9, 9.5, 10, 10.5, 11, 11.5, 12, 12.5, 13, 13.5, 14, 14.5, 15];
y1 = [9 9 9 9 9 9 9 9 9 9 9 9 9];
y2 = [16634.3 166503 166507.7 166511 166483 166519  166525 166528 ...
    166533.3 166533.3 166542.3 166545 166550.3];
figure(31)
subplot(2, 1, 1), plot(x, y1), legend('F10.156')
title('Effektkonsumtion'), xlabel('Tid (klockslag)'), ylabel('Effekt (kW)')
ylim([8.5 9.5])
subplot(2, 1, 2), plot(x, y2), legend('F10.156')
title('Energikonsumtion'), xlabel('Tid (klockslag)'), ylabel('Energi (kWh)')
```

A7 – Datasheet for the washing machine & dryer

Elanslutningar					
Uppvärmnings-alternativ	Nätspänning	Hz	Värmeeffekt kW	Total effekt kW	Rekommenderad säkring A
Eluppvärmd	230V 1 ~	50	5.4/7.5	5.5/7.6	25/35
	230V 1 ~	50	2.0/3.0	2.1/3.1	16/16
	400V 3N ~	50	5.4/7.5	5.5/7.6	10/16
	400V 3N ~	50	3.0/4.3	3.1/4.5	10
Ånguppvärmd	230/400V 1 ~	50	-	1.0	10

Vatten- och ånganslutning		W575H, W575HLE
Vattenventiller	DN	20
Vattentryck	kPa	200-600
Kapacitet vid 300 kPa	l/min	20
Avloppsventil	ø mm	50/75
Tömningskapacitet	l/min	170
Max tömning	l	30
Ångventil	DN	15
Ångtryck	kPa	300-600
Anslutning för flytande tvättmedel		5
Golvkrav		
Dynamisk kraftfrekvens	Hz	20.8
Golvbelastning vid max. centrifugering	kN	1.9 ± 0.5
Ljudnivå		
Ljudnivå/ljudtrycksnivå vid centrifugering*	dB(A)	73/59
Ljudnivå/ljudtrycksnivå vid tvätt*	dB(A)	61/47
Värmeavgivning		
% av installerad effekt, max.		5
Skeppningsdata**		
	netto, kg	158
Fraktvolym	m^3	0.81
Tillbehör		
Förhöjningssocklar		x
Sockel med utdragbar luddlåda		x
Slanganslutningssatser för vatten och ånga		x
Luddlådor i rostfritt stål		x
Mått i mm		
A Bredd		720
B Djup		721
C Höjd		1132
D1		352
D2		406





Elanslutningar					
Uppvärmnings-alternativ	Nätspänning	Hz	Värmeeffekt kW	Total effekt kW	Rekommenderad säkring A
Eluppvärmd	230V 1N ~	50	6.0/8.0	6.3/8.3	35/50
	400V 3N ~	50	6.0/8.0	6.3/8.3	10/16

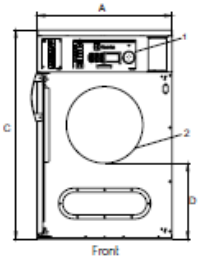
Luftanslutningar		T5190
Evakuering	ø mm	125
Evakuerad luft	m^3/h	270
	l/s	75
Tryckfall (el)	Max. Pa	380
Ljudnivå		
Ljudnivå/ljudtrycksnivå vid torkning*	dB(A)	67/53
Värmeavgivning		
% av installerad effekt, max.		15
Vikt		
	netto, kg	99
Dimensioner i mm		
A Bredd		721
B(a) Djup		759
B(b) Djup		684
C Höjd		1114
D		404
E		45
F		180
G		88
H		113

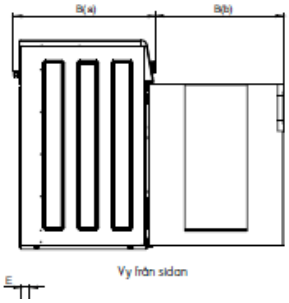
1 Manöverpanel
2 Lucköppning ø 400 mm
3 Elanslutning
4 Evakueringsanslutning

Färg på front och sidopaneler:
blå (NCS S2050-R90B), (RAL 250 6030)
ljusgrå (NCS S3005-R80B), (RAL 260 7005)

Anslutningskabel ingår ej

* Ljudnivåer uppmätta enligt ISO 60704.





A8 – Datasheet for the arena lights ArenaVision & OptiVision LED

Ljusteknik	
Uppåtriktat ljusflödesförhållande	0
Standardvinkel för stolptoppsmontage	0°
Standardvinkel för sidoingång	-

Drift och elektricitet	
Inspänning	220-400 V
Ingångsfrekvens	50–60 Hz
Ingående ström	20 A
Strömrusningstid	0,160 ms
Effektfaktor (min)	0.9

Styrenheter och dimring	
Dimbara	Ja

Mekanik och armaturhus	
Armaturhusets material	Aluminium
Material i reflektor	-
Material i optiken	Polykarbonat

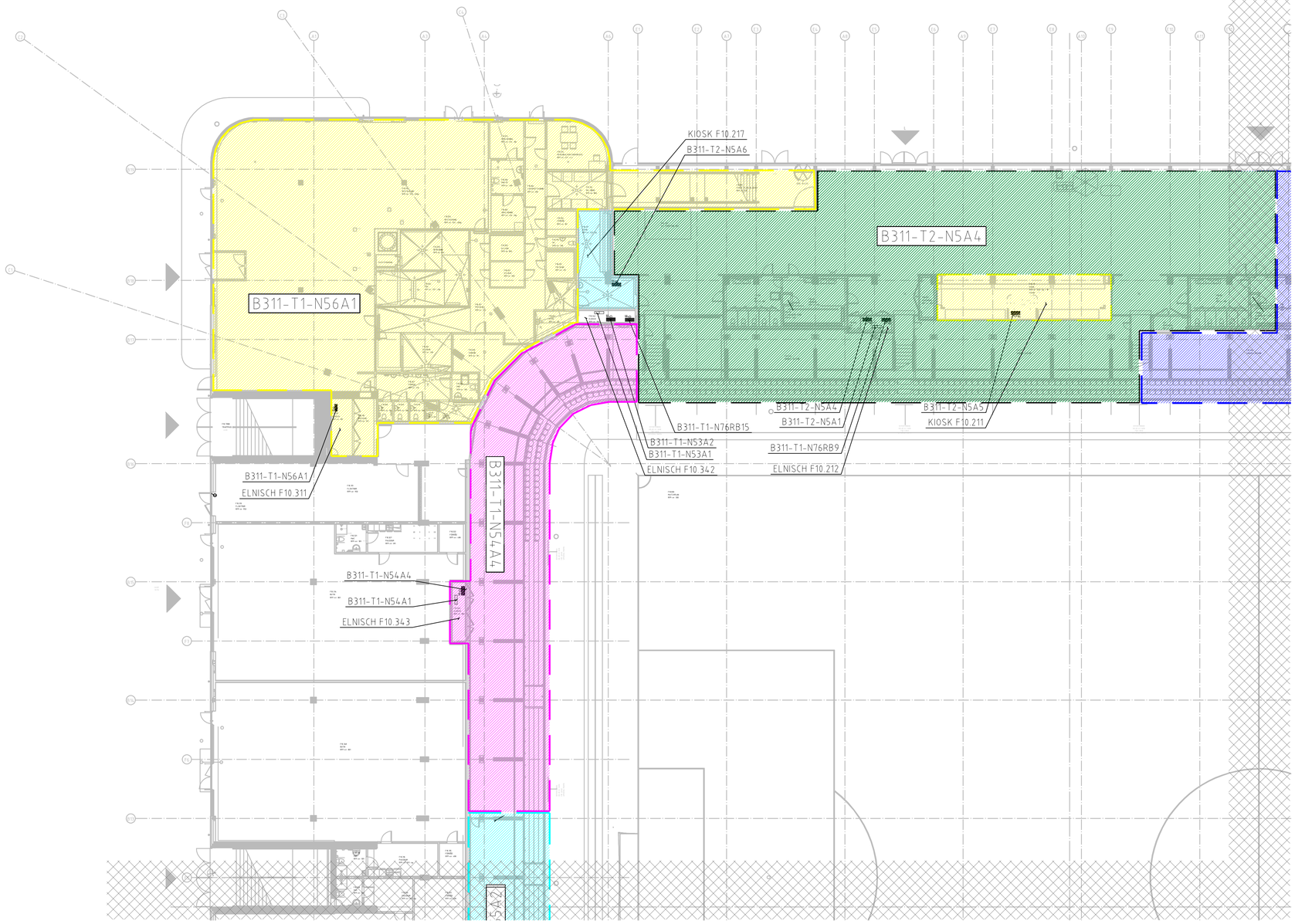
Initialt ljusflöde	194714 lm
Tolerans för ljusflöde	+/-7%
Initialt LED-ljusutbyte	130 lm/W
Init. Corr. färgtemperatur	5700 K
Initialt färgåtergivningsindex	>70
Initial kromaticitet	(0.329, 0.342) SDCM <5
Initial ineffekt	1500 W
Tolerans för energiförbrukning	+/-10%
Tolerans vid initialt färgåtergivningsindex	+/-2

Prestanda över tid (IEC-kompatibel)	
Felfrekvens av styrsystem vid medellivslängd 50000h	0,5 %
Bibehållet ljusflöde vid medellivslängd* 50000h	L80

Användningsförhållanden	
Omgivningstemperatur	–40 till +55 °C
Prestanda omgivningstemperatur Tq	25 °C
Max. dimringsnivå	10%

SKRAFFERADE FÄRGLAGDA YTOR =
BETJÄNINGSOMRÅDE GRUPPCENTRAL EL.

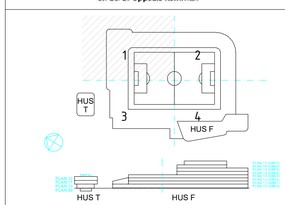
B311-T1-N61A2 EXEMPEL MÄRKNING GRUPPCENTRAL EL
B311-T2-N22A2 SAMT BETJÄNINGSOMRÅDE



-		-	-	-
BET	ANT	ÄNDRINGEN AVSER	DATUM	SIGN

–

sportfastigheter
– en del av Uppsala kommun



STUDENTERNAS, 1404

FASTIGHETSNUMMER	BYGGNADSNUMMER	FASTIGHETSBETECKNING
133		Kronåsen 2:1, Uppsala

UPPDRAG NR	RITAD/KONSTR AV	HANDLÄGGARE
10246692	-	-

KONSULT
WSP SVERIGE AB, TEL:010-722 50 00

DATUM	ANSVARG
2020-08-17	-

NYBYGGNAD
PLAN 10 / DEL 1

BETJÄNINGSOMRÅDE ELCENTRALER

FORMAT	SKALA	NUMMER	BET
A1	1:200	B311-E-63C-1-101	

XREF: \\AJModell\B311-A-40-P-100.dwg
\\AJKomp\Från SHP-M2-002_Konnektionslinjer 1-200.dwg
\\AJKomp\P-M1-B311_Systemlinjer 1-100.dwg
\\EJModell\B311-E-63C-P-100.dwg
\\EJKomp\B311-E-60-X-forsorjn.dwg

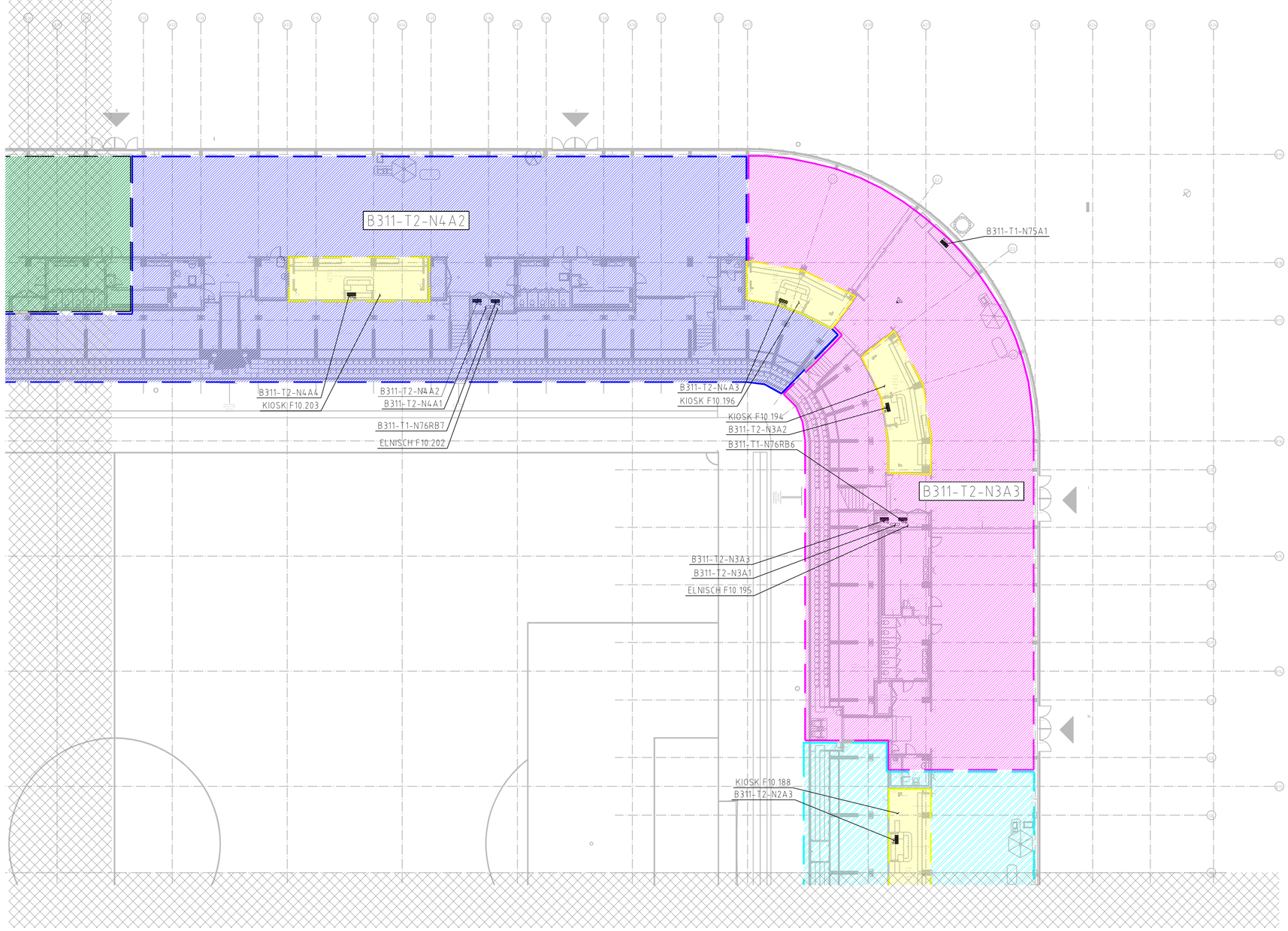
LAGER:

SKALA 1:200 (A1) 0 10 20

PLO: R:\6224\10246692 - STUDENTERNAS BYGGHANDLING EL\4_CAD\ERITDEF\B311-E-63C-1-101.DWG

SKRAFFERADE FÄRGLAGDA YTOR =
BETJÄNINGSOMRÅDE GRUPPCENTRAL EL.

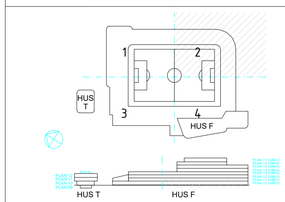
B311-T1-N61A2
B311-T2-N22A2
EXEMPEL MÄRKNING GRUPPCENTRAL EL
SAMT BETJÄNINGSOMRÅDE



-		-	-	-
BET	ANT	ÄNDRINGEN AVSER	DATUM	SIGN

-

sportfastigheter
– en del av Uppsala kommun



STUDENTERNAS, 1404

FASTIGHETSNUMMER	BYGGNADSNUMMER	FASTIGHETSBETECKNING
133		Kronåsen 2:1, Uppsala

UPPDRAG NR	RITAD/KONSTRUERAV	HANDLÄGGARE
10246692	-	-

KONSULT
WSP SVERIGE AB, TEL:010-722 50 00

DATUM	ANSVARIG
2020-08-17	-

NYBYGGNAD
PLAN 10 / DEL 2

BETJÄNINGSOMRÅDE ELCENTRALER

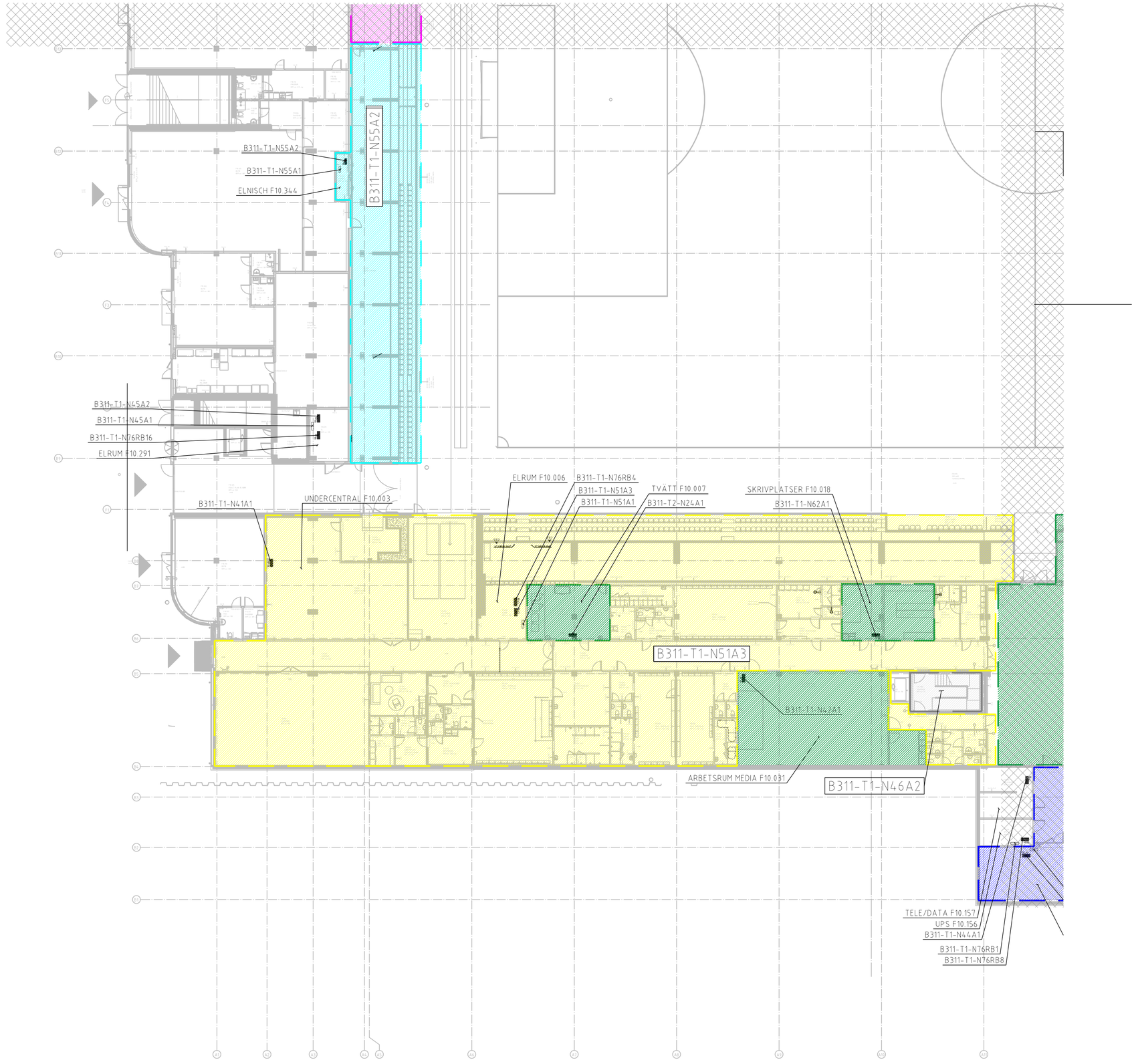
FORMAT	SKALA	NUMMER	BET
A1	1:200	B311-E-63C-1-102	

XREF: \..\A\Modell\B311-A-40-P-100.dwg
\..\A\Komp\Från SHP-M2-002_Konnektionslinjer 1-200.dwg
\..\A\Komp\P-M1-B311_Systemlinjer 1-100.dwg
\..\E\Modell\B311-E-63C-P-100.dwg
\Komp\B311-E-60-X-Tarsorjn.dwg

LAGER:

SKALA 1:200 (A1) 0 10 20

PLOT: R:\6224\10246692 - STUDENTERNAS BYGGHANDLING EL\4_CAD\ERITDEF\B311-E-63C-1-102.DWG



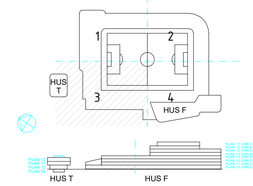
SKRAFFERADE FÄRGLAGDA YTOR = BETJÄNINGSOMRÅDE GRUPPCENTRAL EL.

B311-T1-N61A2 EXEMPEL MÄRKNING GRUPPCENTRAL EL
B311-T2-N22A2 SAMT BETJÄNINGSOMRÅDE

BET	ANT	ÄNDRINGEN AVSER	DATUM	SIGN
-		-	-	-

–

sportfastigheter – en del av Uppsala kommun



STUDENTERNAS, 1404

FASTIGHETSNUMMER	BYGGNADSNUMMER	FASTIGHETSBETECKNING
133		Kronåsen 2:1, Uppsala

UPPDRAG NR	RITAD/KONSTRAV	HANDLÄGGARE
10246692	-	-

KONSULT: WSP SVERIGE AB, TEL:010-722 50 00

DATUM	ANSVARG
2020-08-17	-

NYBYGGNAD
PLAN 10 / DEL 3

BETJÄNINGSOMRÅDE ELCENTRALER

FORMAT	SKALA	NUMMER	BET
A1	1:200	B311-E63C-1-103	

SKALA 1:200 (A1) 0 10 20

XREF: \\AA\Modell\B311-A-40-P-100.dwg
\\AA\Komp\Från SH\P-M2-002_Konnektionslinjer 1-200.dwg
\\AA\Komp\P-M1-B311_Systemlinjer 1-100.dwg
\\E\Modell\B311-E-63C-P-100.dwg
\Komp\B311-E-60-X-Torsor.n.dwg

LAGER:

PLO: R:\6224\10246692 - STUDENTERNAS BYGGHANDLING EL\4_CAD\ERITDEF\B311-E-63C-1-103.DWG

SKRAFFERADE FÄRGLAGDA YTOR =
BETJÄNINGSOMRÅDE GRUPPCENTRAL EL.

B311-T1-N61A2
B311-T2-N22A2
EXEMPEL MÄRKNING GRUPPCENTRAL EL
SAMT BETJÄNINGSOMRÅDE

KIOSK F10.188
B311-T2-N2A3
B311-T2-N2A2
ELNISCH F10.185
B311-T2-N2A2
B311-T2-N2A1
B311-T1-N76RB5
TVÄTT F10.094
B311-T2-N11A1
B311-T1-N76RB3
ELRUM F10.006
B311-T1-N63A1
B311-T1-N76RB2
B311-T1-N63A5
ELRUM F10.098
B311-T1-N63A5
B311-T2-N1A3
B311-T2-N1A1
B311-T2-N1A3
ELNISCH F10.153
B311-T2-N1A2
B311-T1-N63A5
B311-T2-N22A2
B311-T2-N1A3
B311-T1-N63A5
B311-T2-N22A2
B311-T2-N1A2
VERKSTAD / DRIFT F10.148
TELE/DATA F10.157
UPS F10.156
B311-T1-N44A1
B311-T1-N76RB1
B311-T1-N76RB8
B311-T2-N22A1
B311-T2-N22A2
STÄLLVERK F10.155

BET	ANT	ÄNDRINGEN AVSER	DATUM	SIGN
		–		

sportfastigheter
– en del av Uppsala kommun

HUS T
HUS F

STUDENTERNAS, 1404

FASTIGHETSNUMMER	BYGGNADSNUMMER	FASTIGHETSBETECKNING
133		Kronåsen 2:1, Uppsala

UPPDRAG NR	RITAD/KONSTR.AV	HANDLÄGGARE
10246692	–	–

KONSULT
WSP SVERIGE AB, TEL:010-722 50 00

DATUM	ANSVARG
2020-08-17	–

NYBYGGNAD
PLAN 10 / DEL 4

BETJÄNINGSOMRÅDE ELCENTRALER

FORMAT	SKALA	NUMMER	BET
A1	1:200	B311-E-63C-1-104	

XREF: \\.\A\Modell\B311-A-40-P-100.dwg
\\.\A\Komp\Från SHVP-M2-002_Kanalisationslinjer 1-200.dwg
\\.\A\Komp\P-M1-B311_Systemlinjer 1-100.dwg
\\.\EV\Modell\B311-E-63C-P-100.dwg
\Komp\B311-E-60-X-Torsorin.dwg

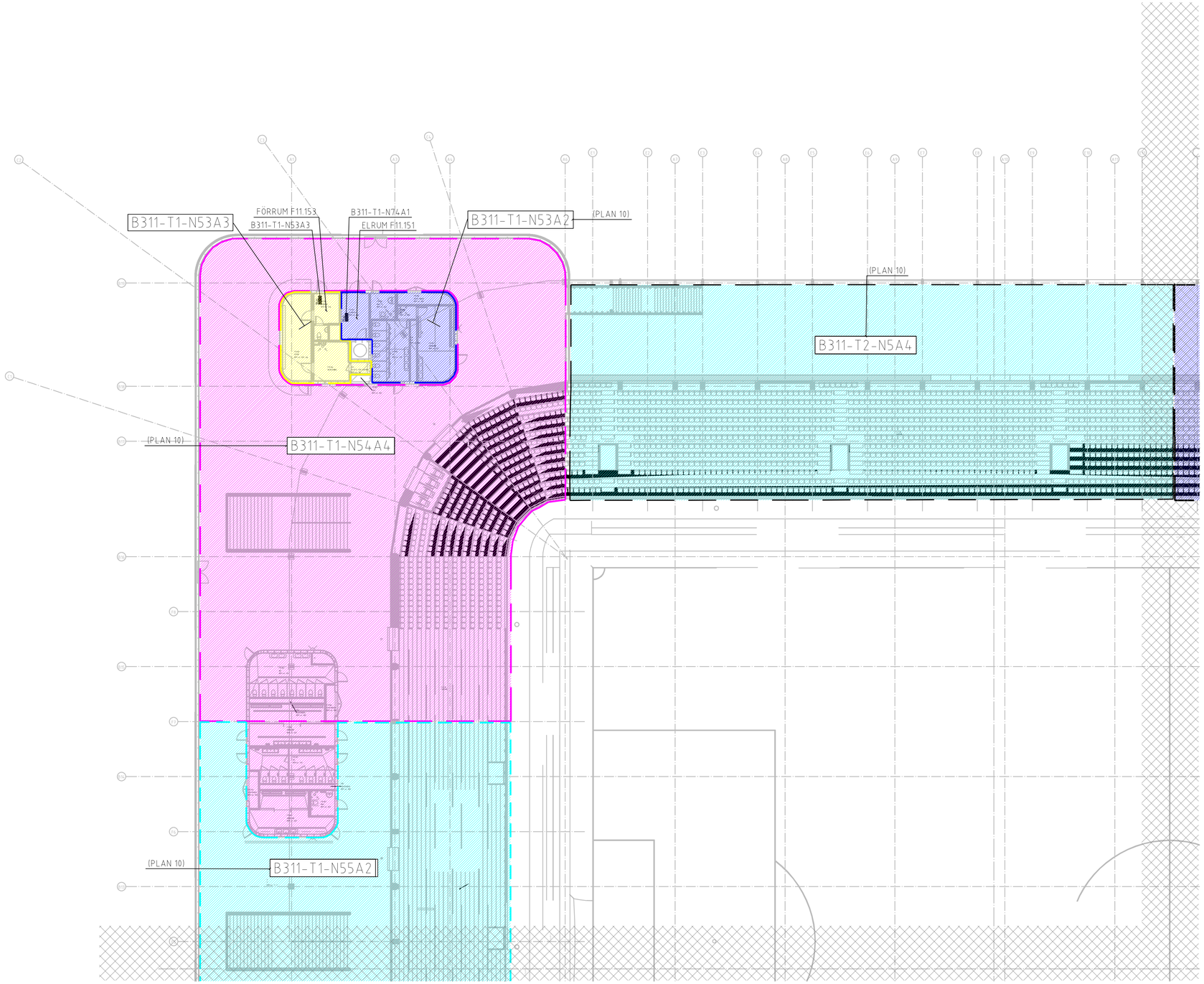
LAGER: SB11

SKALA 1:200 (A1) 0 10 20

PLOT: R:\6224\10246692 - STUDENTERNAS BYGGHANDLING EL\4_CAD\E\RITDEF\B311-E-63C-1-104.DWG

SKRAFFERADE FÄRGLAGDA YTOR =
BETJÄNINGSOMRÅDE GRUPPCENTRAL EL.

B311-T1-N61A2
B311-T2-N22A2
EXEMPEL MÄRKNING GRUPPCENTRAL EL
SAMT BETJÄNINGSOMRÅDE



BET	ANT	ÄNDRINGEN AVSER	DATUM	SIGN
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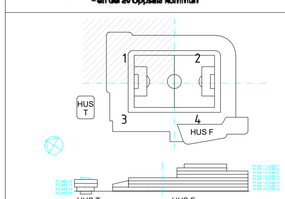
sportfastigheter
– en del av Uppsala kommun



STUDENTERNAS, 1404

FASTIGHETSNUMMER	BYGGNADSNUMMER	FASTIGHETSBETECKNING
133		Kronåsen 2:1, Uppsala

UPPDRAG NR	RITAD/KONSTRAV	HANDLÄGGARE
10246692	-	-

KONSULT
WSP SVERIGE AB, TEL:010-722 50 00

DATUM	ANSVARG
2020-08-17	-

NYBYGGNAD
PLAN 11 / DEL 1

BETJÄNINGSOMRÅDE ELCENTRALER

FORMAT	SKALA	NUMMER	BET
A1	1:200	B311-E-63C-1-111	

PLOT: R:\6224\10246692 - STUDENTERNAS BYGGHANDLING EL\4_CAD\E\RITDEF\B311-E-63C-1-111.DWG

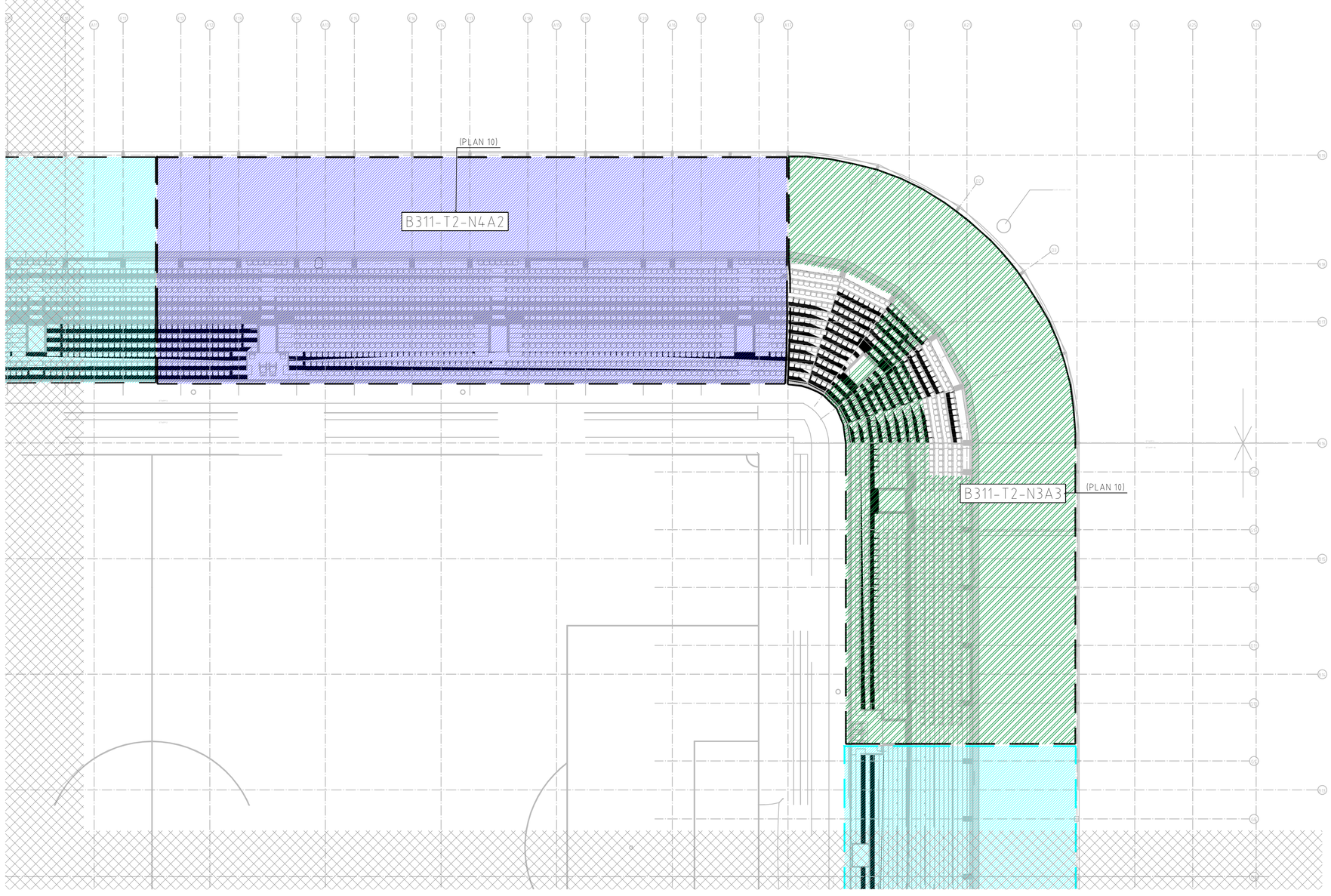
XREF: \..\A\Modell\B311-A-40-P-110.dwg
\..\A\Komp\Från SH\P-M2-002_Kommunikationslinjer 1-200.dwg
\..\A\Komp\P-M1-B311_Systemlinjer 1-100.dwg
\..\E\Modell\B311-E-63C-P-110.dwg
\Komp\B311-E-60-X-torsjn.dwg

LAGER:

SKALA 1:200 (A1) 0 10 20

SKRAFFERADE FÄRGLAGDA YTOR =
BETJÄNINGSOMRÅDE GRUPPCENTRAL EL.

B311-T1-N61A2
B311-T2-N22A2
EXEMPEL MÄRKNING GRUPPCENTRAL EL
SAMT BETJÄNINGSOMRÅDE



BET	ANT	ÄNDRINGEN AVSER	DATUM	SIGN
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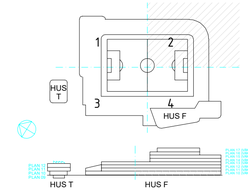
sportfastigheter
– en del av Uppsala kommun



STUDENTERNAS, 1404

FASTIGHETSNUMMER	BYGGNADSNUMMER	FASTIGHETSBETECKNING
133		Kronåsen 2:1, Uppsala

UPPDRAG NR	RITAD/KONSTRAV	HANDLÄGGARE
10246692	-	-

KONSULT
WSP SVERIGE AB, TEL:010-722 50 00

DATUM	ANSVARG
2020-08-17	-

NYBYGGNAD
PLAN 11 / DEL 2

BETJÄNINGSOMRÅDE ELCENTRALER

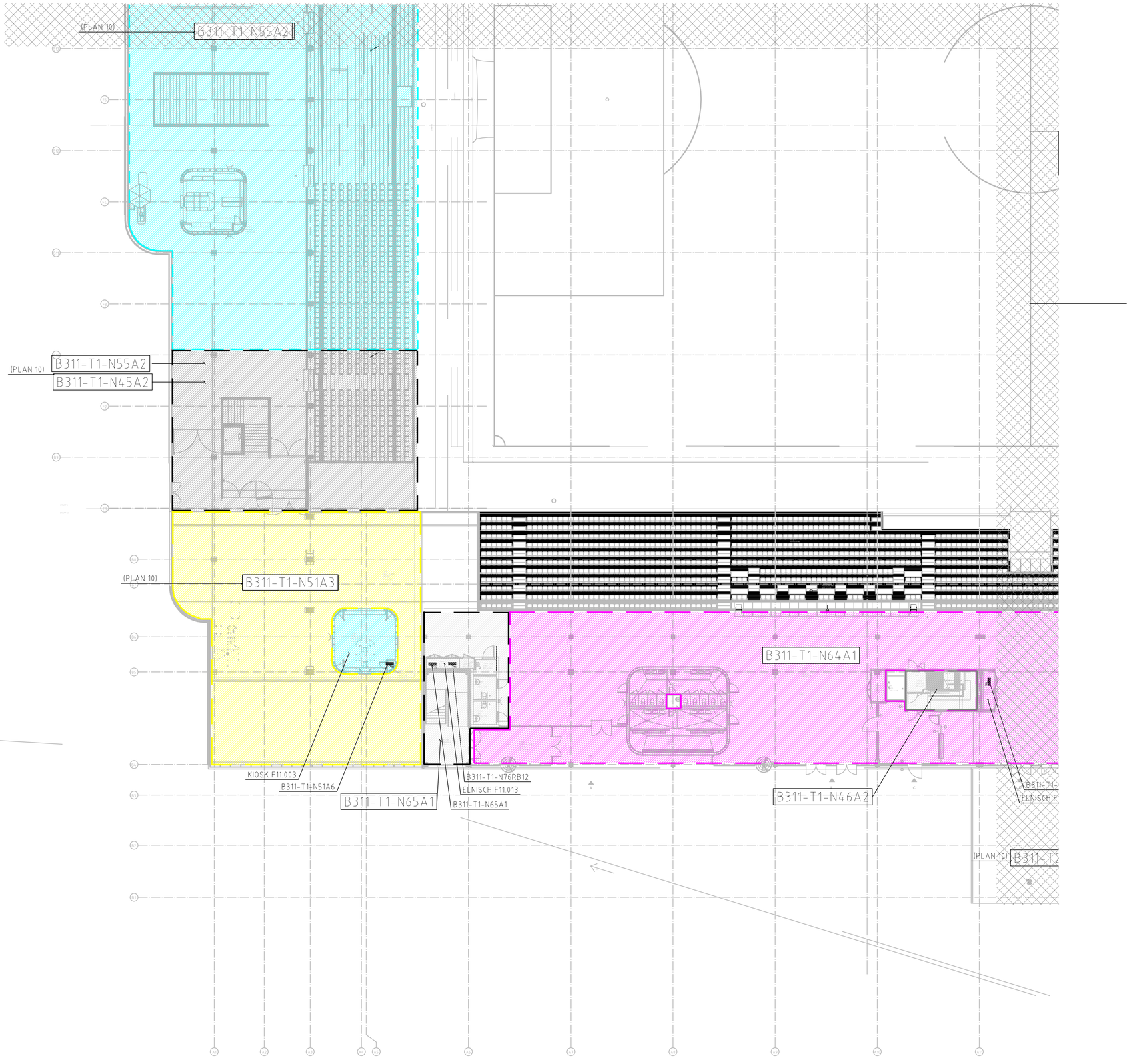
FORMAT	SKALA	NUMMER	BET
A1	1:200	B311-E-63C-1-112	

XREF: \..\A\Modell\B311-A-40-P-110.dwg
\..\A\Komp\Från SH\P-M2-002_Kommektionslinjer 1-200.dwg
\..\A\Komp\P-M1-B311_Systemlinjer 1-100.dwg
\..\E\Modell\B311-E-63C-P-110.dwg
\Komp\B311-E-60-X-forsorjn.dwg

LAGER:

SKALA 1:200 (A1) 0 10 20

PLOT: R:\6224\10246692 - STUDENTERNAS BYGGHANDLING EL\4_CAD\E\RITDEF\B311-E-63C-1-112.DWG



SKRAFFERADE FÄRGLAGDA YTOR = BETJÄNINGSOMRÅDE GRUPPCENTRAL EL.

B311-T1-N61A2
B311-T2-N22A2
EXEMPEL MÄRKNING GRUPPCENTRAL EL SAMT BETJÄNINGSOMRÅDE

BET	ANT	ÄNDRINGEN AVSER	DATUM	SIGN
-		-	-	-

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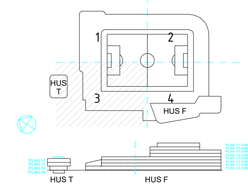
sportfastigheter
– en del av Uppsala kommun



STUDENTERNAS, 1404

FASTIGHETSNUMMER	BYGGNADSNUMMER	FASTIGHETSBETECKNING
133		Kronåsen 2:1, Uppsala

UPPDRAG NR	RITAD/KONSTRAV	HANDLÄGGARE
10246692	-	-

KONSULT
WSP SVERIGE AB, TEL:010-722 50 00

DATUM	ANSVARG
2020-08-17	-

NYBYGGNAD
PLAN 11 / DEL 3

BETJÄNINGSOMRÅDE ELCENTRALER

FORMAT	SKALA	NUMMER	BET
A1	1:200	B311-E63C-1-113	

XREF: \\AA\Modell\B311-A-40-P-110.dwg
\\AA\Komp\Från Sth\P-M2-002_Konnektionslinjer 1-200.dwg
\\AA\Komp\P-M1-B31I_Systemlinjer 1-100.dwg
\\E\Modell\B311-E-63C-P-110.dwg
\Komp\B311-E-60-X-Torsorn.dwg

LAGER:

SKALA 1:200 (A1) 0 10 20

PLO: R:\6224\10246692 - STUDENTERNAS BYGGHANDLING EL\4_CAD\ELRITDEF\B311-E-63C-1-113.DWG

SKRAFFERADE FÄRGLAGDA YTOR = BETJÄNINGSOMRÅDE GRUPPCENTRAL EL.

B311-T1-N61A2 EXEMPEL MÄRKNING GRUPPCENTRAL EL
B311-T2-N22A2 SAMT BETJÄNINGSOMRÅDE

B311-T2-N2A2 (PLAN 10)

B311-T2-N1A3 (PLAN 10)
B311-T2-N1A4
ELNISCH F11.081
B311-T1-N61N2A1
B311-T1-N61N2A2
B311-T1-N76RB14
ELNISCH F11.086
B311-T2-N1A4
B311-T1-N61N2A3
KIOSK F11.072

B311-T1-N64A1

B311-T1-N61N2A2

B311-T1-N64A1
ELNISCH F11.019

B311-T1-N61N1A2

(PLAN 10) B311-T2-N22A2

ELNISCH F11.064
B311-T1-N76RB21
B311-T1-N61A2
B311-T1-N61A1
B311-T1-N61N1A2
ELNISCH F11.053a
B311-T1-N61N1A1
B311-T1-N61A2

BET	ANT	ÄNDRINGEN AVSER	DATUM	SIGN
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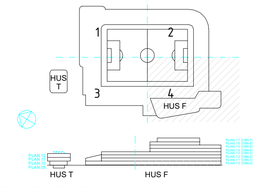
sportfastigheter
– en del av Uppsala kommun



STUDENTERNAS, 1404

FASTIGHETSNUMMER	BYGGNADSNUMMER	FASTIGHETSBETECKNING
133		Kronåsen 2:1, Uppsala

UPPDRAG NR	RITAD/KONSTR AV	HANDLÄGGARE
10246692	-	-

KONSULT
WSP SVERIGE AB, TEL:010-722 50 00

DATUM	ANSVARIG
2020-08-17	-

NYBYGGNAD
PLAN 11 / DEL 4

BETJANINGSOMRÅDE ELCENTRALER

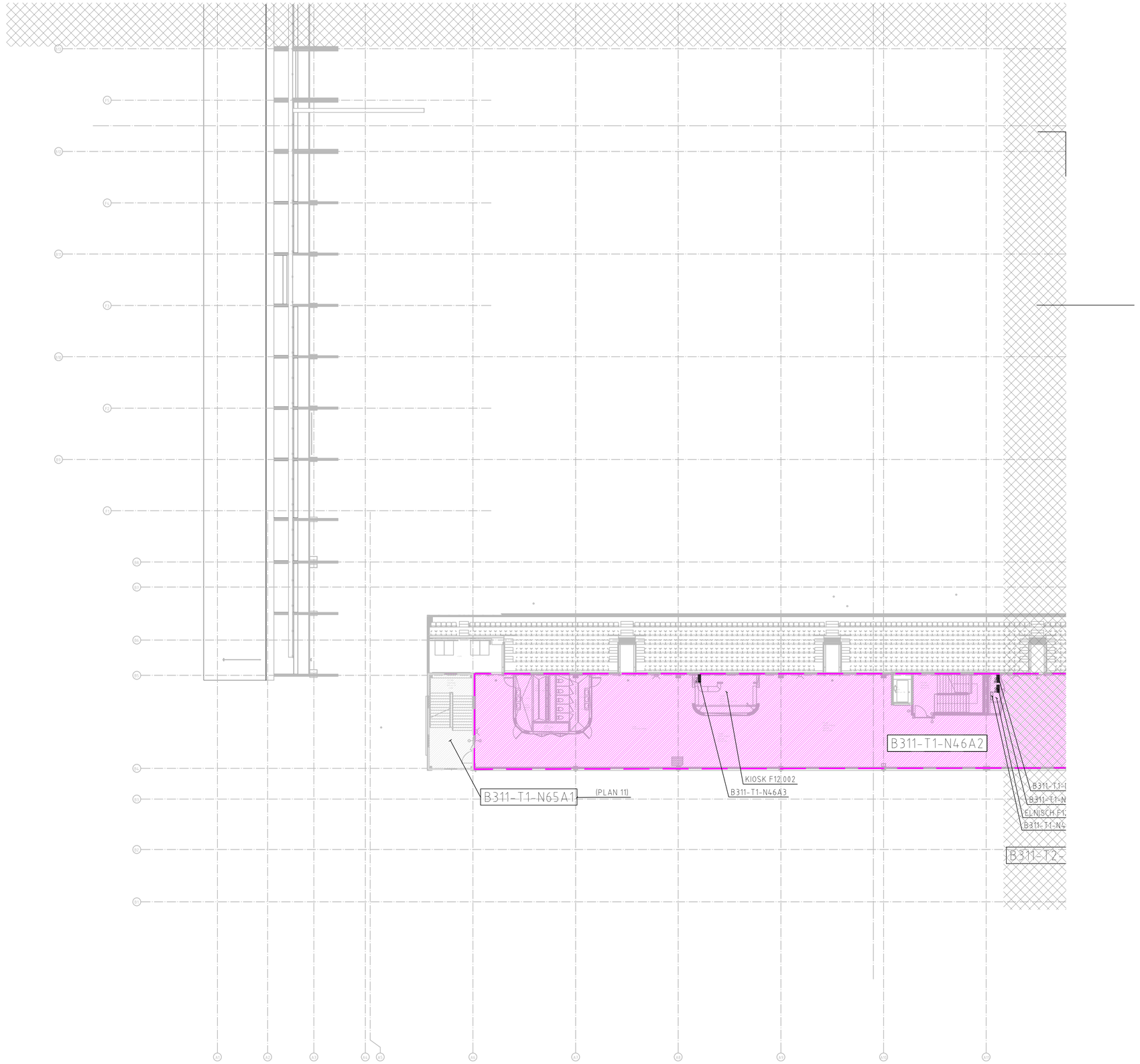
FORMAT	SKALA	NUMMER	BET
A1	1:200	B311-E-63C-1-114	

XREF: \\.\A\Modell\B311-A-40-P-110.dwg
\\.\A\Kompl\Från SHLP-M2-002_Kontekstlinjer 1-200.dwg
\\.\A\Kompl\P-M1-B311_Systemlinjer 1-100.dwg
\\.\EN\Modell\B311-E-63C-P-110.dwg
\\.\LE\Kompl\B311-E-60-X-forsorjn.dwg

LAGER: SB11

SKALA 1:200 (A1) 0 10 20

PLOT: R:\16224\10246692 - STUDENTERNAS BYGGHANDLING EL\4_CAD\E\RITDEF\B311-E-63C-1-114.DWG



SKRAFFERADE FÄRGLAGDA YTOR = BETJÄNINGSOMRÅDE GRUPPCENTRAL EL.

B311-T1-N61A2 EXEMPEL MÄRKNING GRUPPCENTRAL EL SAMT BETJÄNINGSOMRÅDE
B311-T2-N22A2

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BET	ANT	ÄNDRINGEN AVSER	DATUM	SIGN

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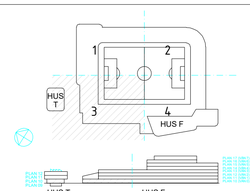
sportfastigheter – en del av Uppsala kommun



STUDENTERNAS, 1404

FASTIGHETSNUMMER	BYGGNADSNUMMER	FASTIGHETSBETECKNING
133		Kronåsen 2:1, Uppsala

UPPDRAG NR	RITAD/KONSTRAV	HANDLÄGGARE
10246692	-	-

KONSULT
WSP SVERIGE AB, TEL:010-722 50 00

DATUM	ANSVARG
2020-08-17	-

NYBYGGNAD
PLAN 12 / DEL 3

BETJÄNINGSOMRÅDE ELCENTRALER

FORMAT	SKALA	NUMMER	BET
A1	1:200	B311-E63C-1-123	

XREF: \..\A\Model\B311-A-40-P-120.dwg
\..\A\Komp\Från SH\P-M2-002_Kommentarslinjer 1-200.dwg
\..\A\Komp\P-M1-B311_Systemlinjer 1-100.dwg
\..\E\Model\B311-E-63C-P-120.dwg
\Komp\B311-E-60-X-torsion.dwg

LAGER:

SKALA 1:200 (A1) 0 10 20

PLOT: R:\6224\10246692 - STUDENTERNAS BYGGHANDLING EL V4_CAD\E\RITDEF\B311-E-63C-1-123.DWG

SKRAFFERADE FÄRGLAGDA YTOR = BETJÄNINGSOMRÅDE GRUPPCENTRAL EL.

B311-T1-N61A2
B311-T2-N22A2
EXEMPEL MÄRKNING GRUPPCENTRAL EL SAMT BETJÄNINGSOMRÅDE

B311-T2-N1A3 (PLAN 10)
B311-T2-N1A4 (PLAN 11)

ELNISCH F12 080
B311-T1-N1A5

B311-T1-N1A5

B311-T1-N46A2

B311-T1-N76R817
B311-T1-N46A2
ELNISCH F12 006
B311-T1-N46A1

B311-T2-N22A2

B311-T1-N61N1A3

ELNISCH F12 088
B311-T1-N61A1

ELNISCH F12 030a
B311-T1-N61N1A3

B311-T1-N61A2 (PLAN 11)

XREF:
\..\A\Modell\B311-A-40-P-120.dwg
\..\A\Komp\Från SH\P-M2-002_Kontrollinjer 1-200.dwg
\..\A\Komp\P-M1-B311_Systemlinjer 1-100.dwg
\..\E\Modell\B311-E-63C-P-120.dwg
\Komp\B311-E-60-X-fors.dwg

LAGER: SB11

SKALA 1:200 (A1) 0 10 20

BET	ANT	ÄNDRINGEN AVSER	DATUM	SIGN
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sportfastigheter
– en del av Uppsala kommun

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STUDENTERNAS, 1404

FASTIGHETSNUMMER	BYGGNADSNUMMER	FASTIGHETSBETECKNING
133		Kronåsen 2:1, Uppsala

UPPDRAG NR	RITAD/KONSTRAV	HANDLÄGGARE
10246692	-	-

KONSULT
WSP SVERIGE AB, TEL:010-722 50 00

DATUM	ANSVARG
2020-08-17	-

NYBYGGNAD
PLAN 12 / DEL 4

BETJÄNINGSOMRÅDE ELCENTRALER

FORMAT	SKALA	NUMMER	BET
A1	1:200	B311-E-63C-1-124	

PLOT: R:\6224\10246692 - STUDENTERNAS BYGGHANDLING EL\4_CAD\E\RITDEF\B311-E-63C-1-124.DWG

SKRAFFERADE FÄRGLAGDA YTOR =
BETJÄNINGSOMRÅDE GRUPPCENTRAL EL.

B311-T1-N61A2 EXEMPEL MÄRKNING GRUPPCENTRAL EL
B311-T2-N22A2 SAMT BETJÄNINGSOMRÅDE

TV-STUDIO F13.003
B311-T1-N72A3
B311-T1-N72A2
B311-T1-N65A1 (PLAN 11)
(PLAN 12) B311-T1-N46A2
B311-T1-
B311-T1-
ELNISCH F
(PLAN 10)
B311-T2-

HUS T
HUS F

-		-	-	-
BET	ANT	ÄNDRINGEN AVSER	DATUM	SIGN

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sportfastigheter
– en del av Uppsala kommun

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STUDENTERNAS, 1404

FASTIGHETSNUMMER	BYGGNADSNUMMER	FASTIGHETSBETECKNING
133		Kronåsen 2:1, Uppsala

UPPDRAG NR	RITAD/KONSTRAV	HANDLÄGGARE
10246692	-	-

KONSULT
WSP SVERIGE AB, TEL:010-722 50 00

DATUM	ANSVARIG
2020-08-17	-

NYBYGGNAD
PLAN 13 / DEL 3

BETJÄNINGSOMRÅDE ELCENTRALER

FORMAT	SKALA	NUMMER	BET
A1	1:200	B311-E63C-1-133	

SKALA 1:200 (A1) 0 10 20

XREF: R:\6224\10246692 - Studenternas Bygghandling EL\4_CAD\A\Modell\B311-A-40-P-130.dwg
R:\6224\10246692 - Studenternas Bygghandling EL\4_CAD\A\Komp\Från SthP-M2-002_Konnektionslinjer 1-200.dwg
R:\6224\10246692 - Studenternas Bygghandling EL\4_CAD\A\Komp\P-M1-B311_Systemlinjer 1-100.dwg
R:\6224\10246692 - Studenternas Bygghandling EL\4_CAD\E\Modell\B311-E-63C-P-130.dwg
R:\6224\10246692 - Studenternas Bygghandling EL\4_CAD\E\Komp\B311-E-60-X-Forsorjn.dwg

LAGER:

PLO: R:\6224\10246692 - STUDENTERNAS BYGGHANDLING EL\4_CAD\E\RITNING\B311-E-63C-1-133.DWG

SKRAFFERADE FÄRGLAGDA YTOR =
BETJÄNINGSOMRÅDE GRUPPCENTRAL EL.

B311-T1-N61A2
B311-T2-N22A2
EXEMPEL MÄRKNING GRUPPCENTRAL EL
SAMT BETJÄNINGSOMRÅDE

B311-T2-N1A3 (PLAN 10)
B311-T2-N1A4 (PLAN 11)

DATANISCH F13.017
B311-T1-N76RB19

(PLAN 11) B311-T1-N61A2

B311-T1-N61A12

B311-T1-N61A9

B311-T1-N72A2

B311-T1-N72A2
B311-T1-N72A1
ELNISCH F13.013

(PLAN 10)
B311-T2-N22A2

B311-T1-N61A11

B311-T1-N61A10

B311-T1-N61A10
B311-T1-N61A9
ELNISCH F13.242

B311-T1-N61A12
ELNISCH F13.407

ELNISCH F13.044
B311-T1-N61A1

ELNISCH F13.309
B311-T1-N61A11

BET	ANT	ÄNDRINGEN AVSER	DATUM	SIGN
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sportfastigheter
– en del av Uppsala kommun

HUS T
HUS F

STUDENTERNAS, 1404

FASTIGHETSNUMMER	BYGGNADSNUMMER	FASTIGHETSBETECKNING
133		Kronåsen 2:1, Uppsala

UPPDRAG NR	RITAD/KONSTRAV	HANDLÄGGARE
10246692	-	-

KONSULT
WSP SVERIGE AB, TEL:010-722 50 00

DATUM	ANSVARIG
2020-08-17	-

NYBYGGNAD
PLAN 13 / DEL 4

BETJÄNINGSOMRÅDE ELCENTRALER

FORMAT	SKALA	NUMMER	BET
A1	1:200	B311-E-63C-1-134	

SKALA 1:200 (A1) 0 10 20

LAGER: SB11

XREF R:\6224\10246692 - Studenternas Bygghandling EL\4_CAD\A\Modell\B311-A-40-P-130.dwg
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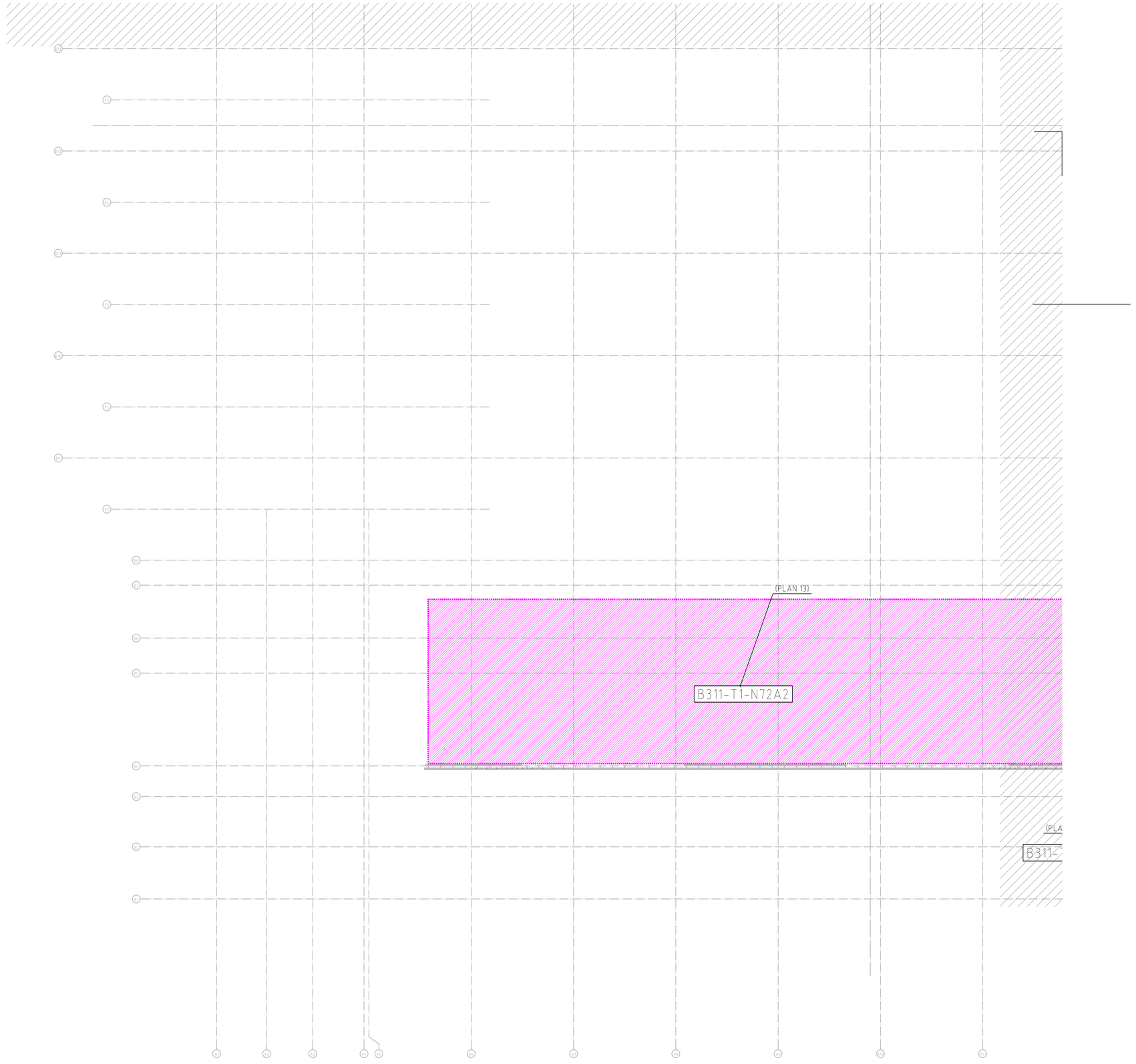
:\4A\Kamp\P-M1-B311_Systemlinjer 1-100.dwg
:\4E\Modell\B311-E-63C-P-130.dwg
:\Kamp\B311-E-60-X-forsörjn.dwg

PLOT R:\6224\10246692 - STUDENTERNAS BYGGHANDLING EL\4_CAD\E\RITDEF\B311-E-63C-1-134.DWG



SKRAFFERADE FÄRGLAGDA YTOR = BETJÄNINGSOMRÅDE GRUPPCENTRAL EL.

B311-T1-N61A2
B311-T2-N22A2
EXEMPEL MÄRKNING GRUPPCENTRAL EL SAMT BETJÄNINGSOMRÅDE

BET	ANT	ÄNDRINGEN AVSER	DATUM	SIGN
-		-	-	-

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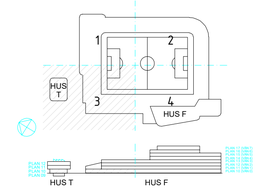
sportfastigheter
– en del av Uppsala kommun



STUDENTERNAS, 1404

FASTIGHETSNUMMER	BYGGNADSNUMMER	FASTIGHETSBETECKNING
133		Kronåsen 2:1, Uppsala

UPPDRAG NR	RITAD/KONSTRÄV	HANDLÄGGARE
10246692	-	-

KONSULT
WSP SVERIGE AB, TEL:010-722 50 00

DATUM	ANSVARG
2020-08-17	-

NYBYGGNAD
PLAN 14 / DEL 3

BETJÄNINGSOMRÅDE ELCENTRALER

FORMAT	SKALA	NUMMER	BET
A1	1:200	B311-E63C-1-143	

SKALA 1:200 (A1) 0 10 20

LAGER:

XREF: \\VA\Model\B311-A-40-P-140.dwg
\\VA\Komp\Från SH\P-M2-002_Konnektionslinjer 1-200.dwg
\\VA\Komp\P-M1-B311_Systemlinjer 1-100.dwg
\\E\Model\B311-E-63C-P-140.dwg
\Komp\B311-E-66-X-tersorjn.dwg

PLO: 2020-08-18 21:43 R:\6224\10246692 - STUDENTERNAS BYGGHANDLING ELV4_CAD\ERITDEF\B311-E-63C-1-143.DWG NORBÄCK, JAN

SKRAFFERADE FÄRGLAGDA YTOR =
BETJÄNINGSOMRÅDE GRUPPCENTRAL EL.

B311-T1-N61A2
B311-T2-N22A2
EXEMPEL MÄRKNING GRUPPCENTRAL EL
SAMT BETJÄNINGSOMRÅDE

B311-T2-N1A3 (PLAN 10)
B311-T2-N1A4 (PLAN 11)

(PLAN 13) B311-T1-N72A2
B311-T2-N14A3
B311-T2-N14A3
B311-T2-N14A3

(PLAN 10) B311-T2-N22A2

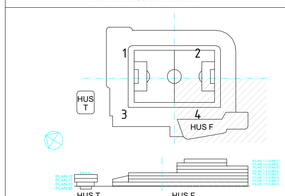
B311-T2-N14A2
ELNISCH F14.018
B311-T2-N14A1
B311-T2-N14A2
B311-T1-N61A1

(PLAN 11) B311-T1-N61A2

-		-	-	-
BET	ANT	ÄNDRINGEN AVSER	DATUM	SIGN

–

sportfastigheter
– en del av Uppsala kommun



STUDENTERNAS, 1404

FASTIGHETSNUMMER	BYGGNADSNUMMER	FASTIGHETSBETECKNING
133		Kronåsen 2:1, Uppsala

UPPDRAG NR	RITAD/KONSTRAV	HANDLÄGGARE
10246692	–	–

KONSULT
WSP SVERIGE AB, TEL:010-722 50 00

DATUM	ANSVARIG
2020-08-17	–

NYBYGGNAD
PLAN 14 / DEL 4

BETJÄNINGSOMRÅDE ELCENTRALER

FORMAT	SKALA	NUMMER	BET
A1	1:200	B311-E-63C-1-144	

XREF: \\VA\Model\B311-A-40-P-140.dwg
\\VA\Kamp\Från SthP-M2-002_Kannekhanslinjer 1-200.dwg
\\VA\Kamp\P-M1-B311_Systemlinjer 1-100.dwg
\\EV\Model\B311-E-63C-P-140.dwg
\Kamp\B311-E-60-X-forsorjn.dwg

LAGER: SB11

SKALA 1:200 (A1) 0 10 20

PLOT: R:\6224\10246692 - STUDENTERNAS BYGGHANDLING EL V4_CAD\E\RITDEF\B311-E-63C-1-144.DWG

SKRAFFERADE FÄRGLAGDA YTOR =
BETJÄNINGSOMRÅDE GRUPPCENTRAL EL.

B311-T1-N61A2 EXEMPEL MÄRKNING GRUPPCENTRAL EL
B311-T2-N22A2 SAMT BETJÄNINGSOMRÅDE

B311-T2-N1A3 (PLAN 10)
B311-T2-N1A4 (PLAN 11)

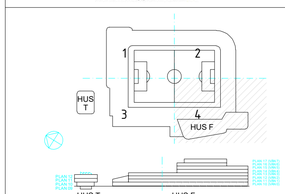
(PLAN 10)
B311-T2-N22A2

B311-T2-N14A2 (PLAN 14)

B311-T1-N61A2 (PLAN 11)

BET	ANT	ÄNDRINGEN AVSER	DATUM	SIGN
		–		

sportfastigheter
– en del av Uppsala kommun



STUDENTERNAS, 1404

FASTIGHETSNUMMER	BYGGNADSNUMMER	FASTIGHETSBETECKNING
133		Kronåsen 2:1, Uppsala

UPPDRAG NR	RITAD/KONSTRAV	HANDLÄGGARE
10246692	–	–

KONSULT
WSP SVERIGE AB, TEL:010-722 50 00

DATUM	ANSVARG
2020-08-17	–

NYBYGGNAD
PLAN 15 / DEL 4

BETJÄNINGSOMRÅDE ELCENTRALER

FORMAT	SKALA	NUMMER	BET
A1	1:200	B311-E-63C-1-154	

XREF: \..\A\Modell\B311-A-40-P-150.dwg
\..\A\Komp\Från SH\P-M2-002_Kontrollinjer 1-200.dwg
\..\A\Komp\P-M1-B311_Systemlinjer 1-100.dwg
\..\E\Modell\B311-E-63C-P-150.dwg
\Komp\B311-E-60-X-torsjn.dwg

LAGER: SB11

SKALA 1:200 (A1) 0 10 20

PLOT: R:\6224\10246692 - STUDENTERNAS BYGGHANDLING ELV4_CAD\E\RITDEF\B311-E-63C-1-154.DWG

SKRAFFERADE FÄRGLAGDA YTOR =
BETJÄNINGSOMRÅDE GRUPPCENTRAL EL.

B311-T1-N61A2
B311-T2-N22A2
EXEMPEL MÄRKNING GRUPPCENTRAL EL
SAMT BETJÄNINGSOMRÅDE

(PLAN 10)
B311-T2-N22A2
B311-T1-N61A13
ELNISCH F16.015
B311-T1-N61A1
ELNISCH F16.202
B311-T1-N61A13
B311-T2-N14 A2
(PLAN 14)
(PLAN 11)
B311-T1-N61A2

BET	ANT	ÄNDRINGEN AVSER	DATUM	SIGN
		–		

sportfastigheter
– en del av Uppsala kommun

HUS T
HUS F

STUDENTERNAS, 1404

FASTIGHETSNUMMER	BYGGNADSNUMMER	FASTIGHETSBETECKNING
133		Kronåsen 2:1, Uppsala

UPPDRAG NR	RITAD/KONSTRAV	HANDLÄGGARE
10246692	–	–

KONSULT
WSP SVERIGE AB, TEL:010-722 50 00

DATUM	ANSVARIG
2020-08-17	–

NYBYGGNAD
PLAN 16 / DEL 4

BETJÄNINGSOMRÅDE ELCENTRALER

FORMAT	SKALA	NUMMER	BET
A1	1:200	B311-E-63C-1-164	

XREF: \\VA\Model\B311-A-40-P-160.dwg
\\VA\Kamp\Från SthP-M2-002_-Konnektionslinjer 1-200.dwg
\\VA\Kamp\P-M1-B311_Systemlinjer 1-100.dwg
\\EV\Model\B311-E-63C-P-160.dwg
\Kamp\B311-E-60-X-forsorjn.dwg

LAGER: SB11

SKALA 1:200 (A1) 0 10 20

PLOT: R:\6224\10246692 - STUDENTERNAS BYGGHANDLING EL V4_CAD\EL\RITDEF\B311-E-63C-1-164.DWG

SKRAFFERADE FÄRGLAGDA YTOR =
BETJÄNINGSOMRÅDE GRUPPCENTRAL EL.

B311-T1-N61A2
B311-T2-N22A2
EXEMPEL MÄRKNING GRUPPCENTRAL EL
SAMT BETJÄNINGSOMRÅDE

B311-T1/T2-N61A7

B311-T1/2-N61A7
ELNISCH F17.203

(PLAN 10)
B311-T2-N22A2

B311-T1-N61A14

B311-T2-N14A2 (PLAN 14)

ELNISCH F17.014
B311-T1-N61A1

B311-T1-N61A14
ELNISCH F17.300

B311-T1-N61A2 (PLAN 11)

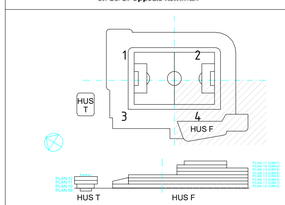
XREF: ..\A\Modell\B311-A-40-P-170.dwg
..\A\Kamp\Från SthP-M2-002_Konnektionslinjer 1-200.dwg
..\A\Kamp\P-M1-B311_Systemlinjer 1-100.dwg
..\E\Modell\B311-E-63C-P-170.dwg
\Kamp\B311-E-60-X-forsorjn.dwg

LAGER: SB11

SKALA 1:200 (A1) 0 10 20

BET	ANT	ÄNDRINGEN AVSER	DATUM	SIGN
		–		

sportfastigheter
– en del av Uppsala kommun



STUDENTERNAS, 1404

FASTIGHETSNUMMER	BYGGNADSNUMMER	FASTIGHETSBETECKNING
133		Kronåsen 2:1, Uppsala

UPPDRAG NR	RITAD/KONSTRAV	HANDLÄGGARE
10246692	–	–

KONSULT
WSP SVERIGE AB, TEL:010-722 50 00

DATUM	ANSVARIG
2020-08-17	–

NYBYGGNAD
PLAN 17 / DEL 4

BETJÄNINGSOMRÅDE ELCENTRALER

FORMAT	SKALA	NUMMER	BET
A1	1:200	B311-E-63C-1-174	

PLOT: R:\6224\10246692 - STUDENTERNAS BYGGHANDLING EL V4_CAD\E\RITDEF\B311-E-63C-1-174.DWG

Enhet & Datum	(kW) & 27/4 (Dag1)
Rum	9:00
F10.153 (vip eller ELNISCH)	11
F10.185 (kan inte hitta information)	4
F17.013 (framtida solcellanläggningar)	0
F10.195 (… eller ELNISCH)	1
F10.202 (… eller ELNISCH/SÄK/VENTNISCH)	4
F10.212 (… eller ELNISCH)	4
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
F14.018 (… eller ELNISCH)	6
F10.094 (… eller TVÄTT)	0
F14.002 (ventilation)	23
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
F10.155 (hissar)	6
F10.162	1
F10.167	0
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXX
F10.006 (uc+ arena eller ELRUM)	13
N57 - (tv-buss {reserv})	0
F10.342 (… eller ELNISCH)	2
F10.343 (ventilation brasseri eller ELNISCH)	3
F10.344 (… eller ELNISCH)	5
F12.006 (kan inte hitta information)	2
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXX
F10.003 (… eller UNDERCENTRAL)	0
F11.019 (… eller ELNISCH)	1
F10.291 (fläktrum norr eller ELNISCH)	2
F10.031 (kan inte hitta information)	1
F10.157 (… eller ARBETSRUM MEDIA)	1
F11.120 (kan inte hitta information)	0
F10.311 (brasseri21 eller ELNISCH)	23
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
F11.064 (… eller ELNISCH)	43
F10.018 (… eller SKRIVPLATSER)	0
F10.098 (… eller ELRUM)	7
F11.013 (… eller ELNISCH)	0
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
F15.001 (kan inte hitta information)	0
F13.013 (kan inte hitta information)	2
F11.151 (… eller ELNISCH)	0
F10.219 (kan inte hitta information)	1
F10.156 (… eller UPS)	9
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXX

(kWh) & 27/4 (Dag1)	(kW) & 27/4 (Dag1)	(kWh) & 27/4 (Dag1)	(kW) & 27/4 (Dag1)
9:00	9:30	9:30	10:00
50722	12	50722	9
99938	3	99938	4
0	0	0	0
35981	1	35981	1
111680	4	111680	4
91933	4	91933	4
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX
43953	5	43953	5
12023	0	12023	0
244179	20	244179	18
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX
73527	5	73527	4
13394	2	13394	1
10106	0	10106	2
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX
198593	12	198593	14
0	0	0	0
36384	3	36384	2
85488	2	85488	4
86551	3	86551	5
34415	1	34415	1
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX
2142	0	2142	0
37995	1	37995	1
19639	1	19639	1
3115	0	3115	0
8826	1	8826	1
1524	0	1524	0
245692	18	245692	70
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX
475924	42	475924	48
350	0	350	0
110604	3	110604	9
13204	0	13204	0
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX
108021	0	108021	0
42387	4	42387	2
92345	0	92345	0
131760	1	131760	0
166290	9	166290	9
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX

(kWh) & 27/4 (Dag1)	(kW) & 27/4 (Dag1)	(kWh) & 27/4 (Dag1)	(kW) & 27/4 (Dag1)	(kWh) & 27/4 (Dag1)
10:00	10:30	10:30	11:00	11:00
50732	9	50732	20	50742
99942	4	99942	4	99946
0	0	0	0	0
35982	1	35982	1	35983
111680	4	111680	4	111687
91936	4	91936	4	91940
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX
43964	5	43964	2	43968
12023	0	12023	0	12023
244198	23	244198	22	244214
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX
73531	4	73531	4	73536
13395	1	13395	1	13395
10106	2	10106	0	10111
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX
198604	14	198604	14	198617
0	0	0	0	0
36386	2	36386	2	36388
85491	4	85491	6	85496
86555	5	86555	5	86559
34417	1	34417	1	34418
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX
2142	0	2142	0	2142
37996	1	37996	1	37997
19640	1	19640	1	19641
3115	0	3115	0	3115
8827	1	8827	1	8828
1524	0	1524	0	1524
245724	70	245724	34	245765
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX
475967	48	475967	42	476009
350	0	350	0	351
110611	9	110611	9	110621
13204	0	13204	0	13205
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX
108021	0	108021	0	108021
42389	2	42389	2	42390
92345	0	92345	0	92345
131767	0	131767	1	131767
166298	9	166298	9	166306
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX

(kW) & 27/4 (Dag1)	(kWh) & 27/4 (Dag1)	(kW) & 27/4 (Dag1)	(kWh) & 27/4 (Dag1)	(kW) & 27/4 (Dag1)
11:30	11:30	12:00	12:00	12:30
20	50742	8	50750	8
4	99946	4	99951	4
0	0	0	0	0
1	35983	1	35984	1
4	111687	4	111692	4
4	91940	4	91944	4
XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX
2	43968	2	43970	2
0	12023	2	12025	2
22	244214	22	244235	22
XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX
4	73536	5	73541	5
1	13395	1	13396	1
0	10111	2	10115	2
XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX
14	198617	10	198632	10
0	0	0	0	0
2	36388	2	36389	2
6	85496	10	85503	10
5	86559	5	86564	5
1	34418	1	34420	1
XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX
0	2142	0	2143	0
1	37997	0	37997	0
1	19641	1	19643	1
0	3115	0	3116	0
1	8828	1	8829	1
0	1524	0	1524	0
34	245765	35	245798	35
XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX
42	476009	58	476058	58
0	351	1	351	1
9	110621	10	110630	10
0	13205	0	13205	0
XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX
0	108021	0	108021	0
2	42390	1	42392	1
0	92345	0	92345	0
1	131767	0	131768	0
9	166306	9	166315	9
XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX

(kWh) & 27/4 (Dag1)	(kW) & 27/4 (Dag1)	(kWh) & 27/4 (Dag1)	(kW) & 27/4 (Dag1)	(kWh) & 27/4 (Dag1)
12:30	13:00	13:00	13:30	13:30
50750	7	50756	7	50756
99951	4	99955	4	99955
0	0	0	0	0
35984	1	35985	1	35985
111692	4	111696	4	111696
91944	5	91958	5	91958
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX
43970	2	43972	2	43972
12025	0	12026	0	12026
244235	22	244257	22	244257
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX
73541	4	73546	4	73546
13396	1	13397	1	13397
10115	3	10119	3	10119
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX
198632	10	198642	10	198642
0	0	0	0	0
36389	2	36391	2	36391
85503	9	85512	9	85512
86564	5	86569	5	86569
34420	2	34421	2	34421
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX
2143	0	2143	0	2143
37997	1	37998	1	37998
19643	2	19644	2	19644
3116	0	3116	0	3116
8829	1	8830	1	8830
1524	0	1524	0	1524
245798	22	245840	22	245840
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX
476058	48	476110	48	476110
351	0	351	0	351
110630	8	110639	8	110639
13205	0	13205	0	13205
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX
108021	0	108021	0	108021
42392	2	42394	2	42394
92345	0	92345	0	92345
131768	0	131768	0	131768
166315	9	166323	9	166323
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX

(kW) & 27/4 (Dag1)	(kWh) & 27/4 (Dag1)	(kW) & 27/4 (Dag1)	(kWh) & 27/4 (Dag1)	(kW) & 27/4 (Dag1)
14:00	14:00	14:30	14:30	15:00
7	50764	7	50764	7
4	99960	4	99960	5
0	0	0	0	0
1	35986	1	35986	1
4	111700	4	111700	7
4	91952	4	91952	4
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX
2	43974	2	43974	2
0	12026	0	12026	0
24	244280	24	244280	23
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX
6	73552	6	73552	5
1	13397	1	13397	1
0	10120	0	10120	0
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX
11	198653	11	198653	11
0	0	0	0	0
2	36393	2	36393	2
6	85519	6	85519	3
5	86569	5	86569	5
2	34423	2	34423	2
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX
0	2143	0	2143	0
0	37999	0	37999	1
1	19646	1	19646	2
0	3117	0	3117	0
1	8831	1	8831	1
0	1524	0	1524	0
27	245876	27	245876	20
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX
43	476151	43	476151	54
0	351	0	351	0
9	110646	9	110646	8
0	13205	0	13205	0
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX
0	108021	0	108021	0
1	42395	1	42395	3
0	92345	0	92345	0
0	131768	0	131768	0
9	166332	9	166332	9
XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX

(kWh) & 27/4 (Dag1)	XXXXXXXXXXXXXXXXX	Enhet
15:00	XXXXXXXXXXXXXXXXX	Rum
50773	XXXXXXXXXXXXXXXXX	F10.153 (vip eller ELNISCH)
99964	XXXXXXXXXXXXXXXXX	F10.185 (kan inte hitta information)
0	XXXXXXXXXXXXXXXXX	F17.013 (framtida solcellanläggningar)
35987	XXXXXXXXXXXXXXXXX	F10.195 (… eller ELNISCH)
111705	XXXXXXXXXXXXXXXXX	F10.202 (… eller ELNISCH/SÄK/VENTNISCH)
91955	XXXXXXXXXXXXXXXXX	F10.212 (… eller ELNISCH)
XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
43976	XXXXXXXXXXXXXXXXX	F14.018 (… eller ELNISCH)
12026	XXXXXXXXXXXXXXXXX	F10.094 (… eller TVÄTT)
244301	XXXXXXXXXXXXXXXXX	F14.002 (ventilation)
XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
73558	XXXXXXXXXXXXXXXXX	F10.155 (hissar)
13398	XXXXXXXXXXXXXXXXX	F10.162
10120	XXXXXXXXXXXXXXXXX	F10.167
XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
198663	XXXXXXXXXXXXXXXXX	F10.006 (uc+ arena eller ELRUM)
0	XXXXXXXXXXXXXXXXX	N57 - (tv-buss {reserv})
36395	XXXXXXXXXXXXXXXXX	F10.342 (… eller ELNISCH)
85523	XXXXXXXXXXXXXXXXX	F10.343 (ventilation brasseri eller ELNISCH)
86578	XXXXXXXXXXXXXXXXX	F10.344 (… eller ELNISCH)
34424	XXXXXXXXXXXXXXXXX	F12.006 (kan inte hitta information)
XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2143	XXXXXXXXXXXXXXXXX	F10.003 (… eller UNDERCENTRAL)
37999	XXXXXXXXXXXXXXXXX	F11.019 (… eller ELNISCH)
19647	XXXXXXXXXXXXXXXXX	F10.291 (fläktrum norr eller ELNISCH)
3117	XXXXXXXXXXXXXXXXX	F10.031 (kan inte hitta information)
8832	XXXXXXXXXXXXXXXXX	F10.157 (… eller ARBETSRUM MEDIA)
1524	XXXXXXXXXXXXXXXXX	F11.120 (kan inte hitta information)
245903	XXXXXXXXXXXXXXXXX	F10.311 (brasseri21 eller ELNISCH)
XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
476196	XXXXXXXXXXXXXXXXX	F11.064 (… eller ELNISCH)
351	XXXXXXXXXXXXXXXXX	F10.018 (… eller SKRIVPLATSER)
110654	XXXXXXXXXXXXXXXXX	F10.098 (… eller ELRUM)
13205	XXXXXXXXXXXXXXXXX	F11.013 (… eller ELNISCH)
XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
108021	XXXXXXXXXXXXXXXXX	F15.001 (kan inte hitta information)
42397	XXXXXXXXXXXXXXXXX	F13.013 (kan inte hitta information)
92345	XXXXXXXXXXXXXXXXX	F11.151 (… eller ELNISCH)
131768	XXXXXXXXXXXXXXXXX	F10.219 (kan inte hitta information)
166341	XXXXXXXXXXXXXXXXX	F10.156 (… eller UPS)
XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

(kW) & 28/4 (Dag2)	(kWh) & 28/4 (Dag2)	(kW) & 28/4 (Dag2)	(kWh) & 28/4 (Dag2)
9:00	9:00	9:30	9:30
6	50843	6	50845
5	100055	5	100055
0	0	0	0
2	36015	1	36015
4	111792	4	111793
3	92034	4	92035
XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
5	44036	2	44037
0	12032	2	12032
20	244538	21	244544
XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
10	73623	6	73625
1	13409	1	13412
3	10131	3	10131
XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
12	198882	15	198885
0	0	0	0
2	36431	2	36432
6	85589	6	85589
5	86670	5	86672
2	34451	2	34451
XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
0	2143	0	2143
1	38023	1	38024
2	19665	1	19666
0	3119	0	3119
1	8853	1	8853
0	1524	0	1524
36	246187	69	246197
XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
49	476735	43	476747
0	351	0	351
8	110749	8	110749
0	13210	0	13210
XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
0	108048	0	108048
1	42422	1	42423
0	92400	0	92400
0	131830	0	131830
9	166503	9	166506
XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX

(kW) & 28/4 (Dag2)	(kWh) & 28/4 (Dag2)	(kW) & 28/4 (Dag2)	(kWh) & 28/4 (Dag2)
10:00	10:00	10:30	10:30
6	50846	6	50849
4	100056	4	100060
0	0	0	0
1	36016	1	36016
4	111794	4	111796
4	92037	4	92039
XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
2	44038	2	44039
0	12033	0	12033
22	244550	21	244561
XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
11	73626	5	73629
1	13412	1	13412
2	10132	0	10133
XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
12	198889	12	198895
0	0	0	0
2	36432	2	36433
7	85593	6	85596
5	86673	5	86676
2	34452	1	34452
XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
0	2143	0	2143
1	38024	1	38024
2	19666	1	19667
0	3119	0	3120
1	8853	1	8854
0	1524	0	1524
31	246212	28	246227
XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
45	476762	44	476785
0	351	0	351
7	110753	7	110757
0	13210	0	13210
XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
0	108048	0	108048
1	42423	1	42423
0	92400	0	92400
0	131830	0	131830
9	166508	9	166513
XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX

(kW) & 28/4 (Dag2)	(kWh) & 28/4 (Dag2)	(kW) & 28/4 (Dag2)	(kWh) & 28/4 (Dag2)
11:00	11:00	11:30	11:30
5	50852	5	50855
5	100062	4	100064
0	0	0	0
1	36016	1	36017
4	111799	4	111801
4	92040	4	92042
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX
2	44040	2	44041
0	12033	0	12033
21	244552	20	244583
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX
6	73632	4	73634
1	13413	1	13413
3	10135	0	10136
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX
13	198901	11	198907
0	0	0	0
2	36434	2	36435
7	85599	7	85599
5	86678	4	86679
2	34453	2	34455
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX
0	2143	0	2143
0	38024	0	38024
1	19668	1	19668
0	3120	0	3120
1	8854	1	8854
0	1524	0	1524
33	246244	40	246262
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX
48	476789	39	476830
0	351	0	351
7	110761	7	110767
0	13210	0	13210
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX
0	108048	0	108048
1	42423	1	42423
0	92400	0	92400
0	131830	0	131830
9	166417	9	166521
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX

(kW) & 28/4 (Dag2)	(kWh) & 28/4 (Dag2)	(kW) & 28/4 (Dag2)
12:00	12:00	12:30
6	50857	5
4	100067	5
0	0	0
1	36018	1
4	111803	4
4	92044	4
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX
2	44042	2
0	12033	0
22	244593	22
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX
9	73637	4
1	13413	1
4	10136	3
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX
11	198913	11
0	0	0
2	36436	2
6	85605	7
5	86683	5
2	34456	1
XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX
0	2146	0
1	38024	0
1	19668	2
0	3120	0
1	8855	1
0	1524	0
36	246281	67
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX
48	476851	49
0	351	0
8	110770	7
0	13210	0
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX
0	108048	0
1	42423	1
0	92400	0
0	131830	0
9	166525	9
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX

(kWh) & 28/4 (Dag2)	(kW) & 28/4 (Dag2)		(kWh) & 28/4 (Dag2)
12:30		13:00	13:00
50860		5	50863
100069		5	100070
0		0	0
36018		1	36019
111805		4	111807
92046		4	92041
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXX
44043		2	44044
12033		0	12033
244604		18	244614
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXX
73639		5	73642
13412		1	13412
10138		0	10139
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXX
198918		12	198924
0		0	0
36437		2	36437
85608		4	85611
86686		5	86688
34456		2	34457
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXX
2146		31	2146
38024		0	38024
19670		1	19671
3120		0	3120
8856		1	8857
1524		0	1524
246306		32	246326
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXX
476878		51	476900
352		0	352
110773		8	110777
13210		0	13210
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXX
108048		0	108048
42423		1	42423
92400		0	92400
131830		0	131830
166530		9	166534
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXX

(kW) & 28/4 (Dag2)	(kWh) & 28/4 (Dag2)	(kW) & 28/4 (Dag2)
13:30	13:30	14:00
6	50865	5
3	100073	4
0	0	0
1	36019	1
4	111810	4
4	92050	4
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX
2	44045	2
0	12033	0
23	244624	24
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX
9	73645	5
1	13412	1
3	10141	5
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX
11	198930	11
0	0	0
2	36438	2
3	85613	3
6	86691	5
2	34457	2
XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX
0	2148	0
1	38026	0
2	19671	2
0	3120	0
1	8857	1
0	1524	0
50	246349	33
XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
44	476931	42
0	352	0
8	110781	7
0	13210	0
XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
0	108048	0
1	42423	1
0	92400	0
0	131830	0
9	166539	9
XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX

(kWh) & 28/4 (Dag2)	(kW) & 28/4 (Dag2)	(kWh) & 28/4 (Dag2)
14:00	14:30	14:30
50868	3	50870
100075	4	100077
0	0	0
36020	1	36020
111811	4	111813
92052	4	92054
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX
44045	2	44044
12033	0	12033
244635	22	244647
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX
73647	4	73650
13412	1	13412
10142	3	10144
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX
198935	12	198941
0	0	0
36439	2	36440
85615	4	85617
86693	5	86696
34457	2	34459
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX
2148	0	2148
38026	0	38026
19671	1	19671
3120	0	3120
8858	1	8858
1524	0	1524
246365	52	246380
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX
476952	48	476975
352	0	352
110785	6	110788
13210	0	13210
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX
108048	0	108048
42423	1	42423
92400	0	92400
131830	0	131830
166543	9	166547
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX

(kW) & 28/4 (Dag2)	(kWh) & 28/4 (Dag2)	XXXXXXXXXXXXXXXXX
15:00	15:00	XXXXXXXXXXXXXXXXX
4	50871	XXXXXXXXXXXXXXXXX
3	100079	XXXXXXXXXXXXXXXXX
0	0	XXXXXXXXXXXXXXXXX
1	36021	XXXXXXXXXXXXXXXXX
4	111816	XXXXXXXXXXXXXXXXX
4	92056	XXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX
2	44047	XXXXXXXXXXXXXXXXX
0	12033	XXXXXXXXXXXXXXXXX
18	244657	XXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX
4	73652	XXXXXXXXXXXXXXXXX
1	13412	XXXXXXXXXXXXXXXXX
1	10145	XXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX
11	198947	XXXXXXXXXXXXXXXXX
0	0	XXXXXXXXXXXXXXXXX
2	36441	XXXXXXXXXXXXXXXXX
3	85618	XXXXXXXXXXXXXXXXX
5	86698	XXXXXXXXXXXXXXXXX
3	34460	XXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX
0	2148	XXXXXXXXXXXXXXXXX
1	38026	XXXXXXXXXXXXXXXXX
1	19671	XXXXXXXXXXXXXXXXX
0	3120	XXXXXXXXXXXXXXXXX
1	8859	XXXXXXXXXXXXXXXXX
0	1524	XXXXXXXXXXXXXXXXX
13	246380	XXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX
40	477001	XXXXXXXXXXXXXXXXX
0	352	XXXXXXXXXXXXXXXXX
6	110791	XXXXXXXXXXXXXXXXX
0	13210	XXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX
0	108048	XXXXXXXXXXXXXXXXX
2	42425	XXXXXXXXXXXXXXXXX
0	92400	XXXXXXXXXXXXXXXXX
0	131830	XXXXXXXXXXXXXXXXX
9	166551	XXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXX

Enhet	(kW) & 29/4 (Dag3)	(kWh) & 29/4 (Dag3)
Rum	9:00	9:00
F10.153 (vip eller ELNISCH)	3	50922
F10.185 (kan inte hitta information)	4	100168
F17.013 (framtida solcellanläggningar)	0	0
F10.195 (… eller ELNISCH)	1	36049
F10.202 (… eller ELNISCH/SÄK/VENTNISCH)	5	111901
F10.212 (… eller ELNISCH)	3	92132
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXX
F14.018 (… eller ELNISCH)	6	44090
F10.094 (… eller TVÄTT)	2	12053
F14.002 (ventilation)	19	244869
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXX
F10.155 (hissar)	4	7313
F10.162 (… eller FLÄKTRUM)	1	13427
F10.167	0	10165
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXX
F10.006 (uc+ arena eller ELRUM)	13	199166
N57 - (tv-buss {reserv})	0	0
F10.342 (… eller ELNISCH)	2	36474
F10.343 (ventilation brasseri eller ELNISCH)	4	85697
F10.344 (… eller ELNISCH)	6	86796
F12.006 (kan inte hitta information)	2	34490
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXX
F10.003 (… eller UNDERCENTRAL)	0	2150
F11.019 (… eller ELNISCH)	1	38049
F10.291 (fläktrum norr eller ELNISCH)	2	19691
F10.031 (kan inte hitta information)	0	3123
F10.157 (… eller ARBETSRUM MEDIA)	1	8879
F11.120 (kan inte hitta information)	0	1524
F10.311 (brasseri21 eller ELNISCH)	11	246681
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXX
F11.064 (… eller ELNISCH)	34	477512
F10.018 (… eller SKRIVPLATSER)	0	352
F10.098 (… eller ELRUM)	9	110886
F11.013 (… eller ELNISCH)	0	13217
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXX
F15.001 (kan inte hitta information)	0	108076
F13.013 (kan inte hitta information)	1	42457
F11.151 (… eller ELNISCH)	0	92454
F10.219 (kan inte hitta information)	0	131891
F10.156 (… eller UPS)	9	167110
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXX

(kW) & 29/4 (Dag3)	(kWh) & 29/4 (Dag3)
9:30	9:30
3	50923
4	100169
0	0
2	36050
4	111902
4	92133
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
6	44092
2	12053
19	244876
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4	73714
1	13427
0	10165
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
16	199172
0	0
2	36475
5	85699
6	86798
2	34491
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
0	2150
1	38049
1	19692
1	3123
1	8879
0	1524
30	246691
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
42	477523
0	352
10	110889
0	13217
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
0	108076
1	42457
0	92454
0	131891
9	166713
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

(kW) & 29/4 (Dag3)	(kWh) & 29/4 (Dag3)
10:00	10:00
4	50925
4	100171
0	0
1	36050
4	111904
4	92135
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2	44095
4	12054
20	244884
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4	73716
1	13427
4	10166
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
15	199178
0	0
2	36476
4	85700
6	86800
2	34492
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
0	2150
1	38049
1	19693
0	3123
1	8880
0	1524
80	246716
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
50	477546
0	353
10	110893
0	13217
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
0	108076
1	42457
0	92454
0	131891
9	166717
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

(kW) & 29/4 (Dag3)	(kWh) & 29/4 (Dag3)	(kW) & 29/4 (Dag3)
10:30	10:30	11:00
4	50926	4
4	100174	5
0	0	0
1	36051	1
4	111907	4
4	92137	3
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2	44096	2
0	12056	0
20	244895	19
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4	73719	4
1	13427	1
3	10169	14
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
14	199186	11
0	0	0
2	36477	2
4	85703	7
6	86806	6
2	34493	2
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
0	2150	28
1	38049	1
1	19693	1
0	3123	0
1	8880	1
0	1524	0
24	246740	71
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
50	477546	42
0	353	0
11	110895	16
0	13217	0
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
0	108076	0
1	42578	1
0	92454	0
0	131891	0
9	166722	9
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

(kWh) & 29/4 (Dag3)	(kW) & 29/4 (Dag3)	(kWh) & 29/4 (Dag3)
11:00	11:30	11:30
50928	3	50930
100176	4	100178
0	0	0
36051	1	36052
111909	4	111911
92139	4	92141
XXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXX
44097	2	44098
12056	0	12056
244900	18	244913
XXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXX
73722	4	73724
13427	1	13427
10172	5	10176
XXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXX
199193	11	199198
0	0	0
36578	2	36478
86705	7	85708
86807	6	86809
34494	2	34495
XXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXX
2151	0	2153
38049	1	38049
19694	1	19695
3123	0	3123
8881	1	8881
1524	0	1524
246760	18	246774
XXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXX
477596	38	477612
353	0	353
110905	10	110911
13217	0	13217
XXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXX
108076	0	108076
42578	1	42578
92454	0	92454
131891	0	131891
166726	9	166730
XXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXXXX

(kW) & 29/4 (Dag3)	(kWh) & 29/4 (Dag3)	(kW) & 29/4 (Dag3)
12:00	12:00	12:30
4	50932	4
4	100181	4
0	0	0
1	36053	1
7	111913	4
4	92143	4
XXXXXXXXXXXXXXXXXXXXXXX)	XXXXXXXXXXXXXXXXXXXXXXX)	XXXXXXXXXXXXXXXXXXXXXXX
2	44099	2
0	12056	0
21	244924	20
XXXXXXXXXXXXXXXXXXXXXXX)	XXXXXXXXXXXXXXXXXXXXXXX)	XXXXXXXXXXXXXXXXXXXXXXX
6	73726	5
1	13427	1
9	10178	2
XXXXXXXXXXXXXXXXXXXXXXX)	XXXXXXXXXXXXXXXXXXXXXXX)	XXXXXXXXXXXXXXXXXXXXXXX
11	199204	11
0	0	0
2	36479	2
8	85712	9
6	86812	6
2	34495	2
XXXXXXXXXXXXXXXXXXXXXXX)	XXXXXXXXXXXXXXXXXXXXXXX)	XXXXXXXXXXXXXXXXXXXXXXX
0	2153	0
0	38050	0
1	19696	1
1	3124	0
1	8882	1
0	1524	0
83	246791	40
XXXXXXXXXXXXXXXXXXXXXXX)	XXXXXXXXXXXXXXXXXXXXXXX)	XXXXXXXXXXXXXXXXXXXXXXX
51	477636	43
0	353	0
7	110914	8
0	13217	0
XXXXXXXXXXXXXXXXXXXXXXX)	XXXXXXXXXXXXXXXXXXXXXXX)	XXXXXXXXXXXXXXXXXXXXXXX
0	108076	0
1	42578	1
0	92454	0
0	131891	0
9	166735	9
XXXXXXXXXXXXXXXXXXXXXXX)	XXXXXXXXXXXXXXXXXXXXXXX)	XXXXXXXXXXXXXXXXXXXXXXX

(kWh) & 29/4 (Dag3)	(kW) & 29/4 (Dag3)	(kWh) & 29/4 (Dag3)
12:30	13:00	13:00
50934	3	50935
100183	4	100185
0	0	0
36053	1	36054
111916	4	111918
92145	4	92147
XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX
44099	2	44101
12056	0	12056
244934	18	244944
XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX
73729	4	73732
13427	1	13427
10180	0	10181
XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX
199210	12	199216
0	0	0
36480	2	36481
85716	7	85720
86815	6	86818
34497	2	34498
XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX
2153	0	2153
38050	1	38051
19696	1	19697
3124	0	3124
8883	1	8883
1524	0	1524
246812	39	246832
XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX
477659	38	477679
353	0	353
110918	8	110922
13218	0	13218
XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX
108076	0	108076
42578	1	42578
92454	0	92454
131891	0	131891
166739	9	166743
XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX

(kW) & 29/4 (Dag3)	(kWh) & 29/4 (Dag3)	(kW) & 29/4 (Dag3)
13:30	13:30	14:00
3	50937	3
5	100187	5
0	0	0
1	36054	1
4	11920	4
4	92149	4
XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX
2	44101	2
0	12056	0
18	244952	18
XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX
4	73734	4
1	13427	1
0	10181	3
XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX
10	199221	10
0	0	0
2	36	2
7	85723	7
6	86821	6
2	34498	2
XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX
0	2155	0
0	38052	0
1	19698	1
0	3124	0
1	8884	1
0	1524	0
26	246853	27
XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX
51	477702	48
0	353	0
8	110926	6
0	13218	0
XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX
0	108076	0
1	42578	1
0	92454	0
0	131891	0
9	166747	9
XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXXXX

(kWh) & 29/4 (Dag3)	(kW) & 29/4 (Dag3)	(kWh) & 29/4 (Dag3)	(kW) & 29/4 (Dag3)
14:00	14:30	14:30	15:00
50939	3	50940	3
100190	4	100192	4
0	0	0	0
36055	1	36055	1
111922	4	111924	4
92151	4	92153	4
XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
44102	2	44103	1
12056	0	12056	0
244961	18	244971	18
XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
73736	4	73738	4
13427	1	13427	1
10182	4	10184	2
XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
199226	10	199231	11
0	0	0	0
36483	2	36484	2
85727	7	85730	4
86824	7	86828	6
34499	2	34500	2
XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
2155	0	2155	0
38052	0	38052	2
19698	1	19699	1
3124	0	3124	0
8884	1	8885	1
1524	0	1524	0
246869	26	246886	48
XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
477726	36	477748	42
353	0	353	0
110930	6	110933	7
13218	0	13218	0
XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
108076	0	108076	0
42578	1	42578	2
92454	0	92454	0
131891	0	131891	0
166752	9	166756	9
XXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX

(kWh) & 29/4 (Dag3) XXXXXXXXXXXXXXXX

15:00 XXXXXXXXXXXXXXXX

50942 XXXXXXXXXXXXXX F10.153 (vip eller ELNISCH)

100194 XXXXXXXXXXXXXX F10.185 (kan inte hitta information)

0 XXXXXXXXXXXXXX F17.013 (framtida solcellanläggningar)

36056 XXXXXXXXXXXXXX F10.195 (… eller ELNISCH)

111926 XXXXXXXXXXXXXX F10.202 (… eller ELNISCH/SÄK/VENTNISCH)

92155 XXXXXXXXXXXXXX F10.212 (… eller ELNISCH)

XXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

44104 XXXXXXXXXXXXXX F14.018 (… eller ELNISCH)

12056 XXXXXXXXXXXXXX F10.094 (… eller TVÄTT)

244979 XXXXXXXXXXXXXX F14.002 (ventilation)

XXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

73740 XXXXXXXXXXXXXX F10.155 (hissar)

13427 XXXXXXXXXXXXXX F10.162 (fläktrum)

10186 XXXXXXXXXXXXXX F10.167 (kan inte hitta information)

XXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

199235 XXXXXXXXXXXXXX F10.006 (uc+ arena eller ELRUM)

0 XXXXXXXXXXXXXX N57 - (tv-buss {reserv})

36484 XXXXXXXXXXXXXX F10.342 (… eller ELNISCH)

85733 XXXXXXXXXXXXXX F10.343 (ventilation brasseri eller ELNISCH)

86831 XXXXXXXXXXXXXX F10.344 (… eller ELNISCH)

34500 XXXXXXXXXXXXXX F12.006 (kan inte hitta information)

XXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

2155 XXXXXXXXXXXXXX F10.003 (… eller UNDERCENTRAL)

38055 XXXXXXXXXXXXXX F11.019 (… eller ELNISCH)

19699 XXXXXXXXXXXXXX F10.291 (... eller ELNISCH)

3124 XXXXXXXXXXXXXX F10.031 (kan inte hitta information)

8885 XXXXXXXXXXXXXX F10.157 (… eller ARBETSRUM MEDIA)

1524 XXXXXXXXXXXXXX F11.120 (kan inte hitta information)

246903 XXXXXXXXXXXXXX F10.311 (brasseri21 eller ELNISCH)

XXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

477766 XXXXXXXXXXXXXX F11.064 (… eller ELNISCH)

353 XXXXXXXXXXXXXX F10.018 (… eller SKRIVPLATSER)

110936 XXXXXXXXXXXXXX F10.098 (… eller ELRUM)

13218 XXXXXXXXXXXXXX F11.013 (… eller ELNISCH)

XXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

108076 XXXXXXXXXXXXXX F15.001 (kan inte hitta information)

42579 XXXXXXXXXXXXXX F13.013 (kan inte hitta information)

92454 XXXXXXXXXXXXXX F11.151 (… eller ELNISCH)

131891 XXXXXXXXXXXXXX F10.219 (kan inte hitta information)

166759 XXXXXXXXXXXXXX F10.156 (… eller UPS)

XXXXXXXXXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

	(kW)	(kW)	(kW)	(kW)
Medelvärde för:	9:00	9:30	10:00	10:30
	6.666666667	7	6.333333333	6.333333333
	4.333333333	4	4	4
	0	0	0	0
	1.333333333	1.333333333	1	1
	4.333333333	4	4	4
	3.333333333	4	4	4
XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX
	5.666666667	4.333333333	3	3
	0.666666667	1.333333333	1.333333333	0
	20.66666667	20	20	21.33333333
XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX
	6.666666667	5	6.333333333	4.333333333
	1	1.333333333	1	1
	1	1	2.666666667	1.666666667
XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX
	12.66666667	14.33333333	13.66666667	13.33333333
	0	0	0	0
	2	2.333333333	2	2
	4.333333333	4.333333333	5	4.666666667
	5.333333333	4.666666667	5.333333333	5.333333333
	2	1.666666667	1.666666667	1.333333333
XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX
	0	0	0	0
	1	1	1	1
	2	1	1.333333333	1
	0.333333333	0.333333333	0	0
	1	1	1	1
	0	0	0	0
	23.33333333	39	60.33333333	40.66666667
XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX
	42	42.33333333	47.66666667	47.33333333
	0	0	0	0
	8	7	8.666666667	9
	0	0	0	0
XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX
	0	0	0	0
	1.333333333	2	1.333333333	1.333333333
	0	0	0	0
	0.333333333	0.333333333	0	0
	9	9	9	9
XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX
Total medelvärde:	170.3333333	183.6666667	211.6666667	187.6666667
Genomsnittligt värde:				

(kW)	(kW)	(kW)	(kW)	(kW)	(kW)
11:00	11:30	12:00	12:30	13:00	13:30
9.666666667	9.333333333	6	5.666666667	5	5.333333333
4.666666667	4	4	4.333333333	4.333333333	4
0	0	0	0	0	0
1	1	1	1	1	1
4	4	5	4	4	4
3.666666667	4	4	4	4.333333333	4.333333333
XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX
2	2	2	2	2	2
0	0	0.666666667	0.666666667	0	0
20.66666667	20	21.66666667	21.33333333	19.33333333	21
XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX
4.666666667	4	6.666666667	4.666666667	4.333333333	5.666666667
1	1	1	1	1	1
5.666666667	1.666666667	5	2.333333333	1	2
XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX
12.66666667	12	10.66666667	10.66666667	11.33333333	10.33333333
0	0	0	0	0	0
2	2	2	2	2	2
6.666666667	6.666666667	8	8.666666667	6.666666667	6.333333333
5.333333333	5	5.333333333	5.333333333	5.333333333	5.666666667
1.666666667	1.666666667	1.666666667	1.333333333	2	2
XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX
9.333333333	0	0	0	10.33333333	0
0.666666667	0.666666667	0.333333333	0	0.666666667	0.666666667
1	1	1	1.333333333	1.333333333	1.666666667
0	0	0.333333333	0	0	0
1	1	1	1	1	1
0	0	0	0	0	0
46	30.66666667	51.33333333	47.33333333	31	32.66666667
XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX
44	39.66666667	52.33333333	50	45.66666667	47.66666667
0	0	0.333333333	0.333333333	0	0
10.66666667	8.666666667	8.333333333	8.333333333	8	8
0	0	0	0	0	0
XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX
0	0	0	0	0	0
1.333333333	1.333333333	1	1	1.333333333	1.333333333
0	0	0	0	0	0
0.333333333	0.333333333	0	0	0	0
9	9	9	9	9	9
XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX
208.6666667	170.6666667	209.6666667	197.3333333	182	178.6666667
	185.0512821				

(kW)	(kW)	(kW)	XXXXXXXXXXXXX	(kWh)	(kWh)
14:00	14:30	15:00	XXXXXXXXXXXXX	9:00	9:30
5	4.333333333	4.666666667	XXXXXXXXXXXXX	50829	50830
4.333333333	4	4	XXXXXXXXXXXXX	100053.6667	100054
0	0	0	XXXXXXXXXXXXX	0	0
1	1	1	XXXXXXXXXXXXX	36015	36015.33333
4	4	5	XXXXXXXXXXXXX	111791	111791.6667
4	4	4	XXXXXXXXXXXXX	92033	92033.66667
XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX
2	2	1.666666667	XXXXXXXXXXXXX	44026.33333	44027.33333
0	0	0	XXXXXXXXXXXXX	12036	12036
22	21.33333333	19.66666667	XXXXXXXXXXXXX	244528.6667	244533
XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX
5	4.666666667	4.333333333	XXXXXXXXXXXXX	51487.66667	73622
1	1	1	XXXXXXXXXXXXX	13410	13411
2.666666667	2.333333333	1	XXXXXXXXXXXXX	10134	10134
XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX
10.66666667	11	11	XXXXXXXXXXXXX	198880.3333	198883.3333
0	0	0	XXXXXXXXXXXXX	0	0
2	2	2	XXXXXXXXXXXXX	36429.66667	36430.33333
5.333333333	5.666666667	3.333333333	XXXXXXXXXXXXX	85591.33333	85592
5.333333333	5.666666667	5.333333333	XXXXXXXXXXXXX	86672.33333	86673.66667
2	2	2.333333333	XXXXXXXXXXXXX	34452	34452.33333
XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX
0	0	0	XXXXXXXXXXXXX	2145	2145
0	0	1.333333333	XXXXXXXXXXXXX	38022.33333	38022.66667
1.333333333	1	1.333333333	XXXXXXXXXXXXX	19665	19665.66667
0	0	0	XXXXXXXXXXXXX	3119	3119
1	1	1	XXXXXXXXXXXXX	8852.666667	8852.666667
0	0	0	XXXXXXXXXXXXX	1524	1524
29	35	27	XXXXXXXXXXXXX	246186.6667	246193.3333
XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX
44.33333333	42.33333333	45.33333333	XXXXXXXXXXXXX	476723.6667	476731.3333
0	0	0	XXXXXXXXXXXXX	351	351
7.333333333	7	7	XXXXXXXXXXXXX	110746.3333	110747.3333
0	0	0	XXXXXXXXXXXXX	13210.33333	13210.33333
XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX
0	0	0	XXXXXXXXXXXXX	108048.3333	108048.3333
1	1	2.333333333	XXXXXXXXXXXXX	42422	42422.33333
0	0	0	XXXXXXXXXXXXX	92399.66667	92399.66667
0	0	0	XXXXXXXXXXXXX	131827	131827
9	9	9	XXXXXXXXXXXXX	166634.3333	166503
XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX	XXXXXXXXXXXXX
169.3333333	171.3333333	164.6666667	XXXXXXXXXXXXXXXXX		
			XXXXXXXXXXXXXXXXX		

(kWh)	(kWh)	(kWh)	(kWh)	(kWh)	(kWh)
10:00	10:30	11:00	11:30	12:00	12:30
50834.33333	50835.66667	50840.66667	50842.33333	50846.33333	50848
100056.3333	100058.6667	100061.3333	100062.6667	100066.3333	100067.6667
0	0	0	0	0	0
36016	36016.33333	36016.66667	36017.33333	36018.33333	36018.33333
111792.6667	111794.3333	111798.3333	111799.6667	111802.6667	111804.3333
92036	92037.33333	92039.66667	92041	92043.66667	92045
XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX
44032.33333	44033	44035	44035.66667	44037	44037.33333
12036.66667	12037.33333	12037.33333	12037.33333	12038	12038
244544	244551.3333	244555.3333	244570	244584	244591
XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX
73624.33333	73626.33333	73630	73631.33333	73634.66667	73636.33333
13411.33333	13411.33333	13411.66667	13411.66667	13412	13411.66667
10134.66667	10136	10139.33333	10141	10143	10144.33333
XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX
198890.3333	198895	198903.6667	198907.3333	198916.3333	198920
0	0	0	0	0	0
36431.33333	36432	36466.66667	36433.66667	36434.66667	36435.33333
85594.66667	85596.66667	85933.33333	85601	85606.66667	85609
86676	86679	86681.33333	86682.33333	86686.33333	86688.33333
34453.66667	34454	34455	34456	34457	34457.66667
XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX
2145	2145	2145.333333	2146	2147.333333	2147.333333
38023	38023	38023.33333	38023.33333	38023.66667	38023.66667
19666.33333	19666.66667	19667.66667	19668	19669	19669.66667
3119	3119.333333	3119.333333	3119.333333	3120	3120
8853.333333	8853.666667	8854.333333	8854.333333	8855.333333	8856
1524	1524	1524	1524	1524	1524
246217.3333	246230.3333	246256.3333	246267	246290	246305.3333
XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX
476758.3333	476766	476798	476817	476848.3333	476865
351.3333333	351.3333333	351.6666667	351.6666667	351.6666667	352
110752.3333	110754.3333	110762.3333	110766.3333	110771.3333	110773.6667
13210.33333	13210.33333	13210.66667	13210.66667	13210.66667	13211
XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX
108048.3333	108048.3333	108048.3333	108048.3333	108048.3333	108048.3333
42423	42463.33333	42463.66667	42463.66667	42464.33333	42464.33333
92399.66667	92399.66667	92399.66667	92399.66667	92399.66667	92399.66667
131829.3333	131829.3333	131829.3333	131829.3333	131829.6667	131829.6667
166507.6667	166511	166483	166519	166525	166528
XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX

(kWh)	(kWh)	(kWh)	(kWh)	(kWh)
13:00	13:30	14:00	14:30	15:00
50851.33333	50851.33333	50857	50858	50862
100070	100070	100075	100076.3333	100079
0	0	0	0	0
36019.33333	36019.33333	36020.33333	36020.33333	36021.33333
111807	111807	111811	111812.3333	111815.6667
92048.66667	92048.66667	92051.66667	92053	92055.33333
XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX
44039	44039	44040.33333	44040.33333	44042.33333
12038.33333	12038.33333	12038.33333	12038.33333	12038.33333
244605	244605	244625.3333	244632.6667	244645.6667
XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX
73640	73640	73645	73646.66667	73650
13412	13412	13412	13412	13412.33333
10146.33333	10146.33333	10148	10149.33333	10150.33333
XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX
198927.3333	198927.3333	198938	198941.6667	198948.3333
0	0	0	0	0
36436.33333	36436.33333	36438.33333	36439	36440
85614.33333	85614.33333	85620.33333	85622	85624.66667
86691.66667	86691.66667	86695.33333	86697.66667	86702.33333
34458.66667	34458.66667	34459.66667	34460.66667	34461.33333
XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX
2147.333333	2147.333333	2148.666667	2148.666667	2148.666667
38024.33333	38024.33333	38025.66667	38025.66667	38026.66667
19670.66667	19670.66667	19671.66667	19672	19672.33333
3120	3120	3120.333333	3120.333333	3120.333333
8856.666667	8856.666667	8857.666667	8858	8858.666667
1524	1524	1524	1524	1524
246332.6667	246332.6667	246370	246380.6667	246395.3333
XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX
476896.3333	476896.3333	476943	476958	476987.6667
352	352	352	352	352
110779.3333	110779.3333	110787	110789	110793.6667
13211	13211	13211	13211	13211
XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX
108048.3333	108048.3333	108048.3333	108048.3333	108048.3333
42465	42465	42465.33333	42465.33333	42467
92399.66667	92399.66667	92399.66667	92399.66667	92399.66667
131829.6667	131829.6667	131829.6667	131829.6667	131829.6667
166533.3333	166533.3333	166542.3333	166545	166550.3333
XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXX

F10.153 (medelvärde):	6.256410256
F10.185 (medelvärde):	4.153846154
	0
F10.195 (medelvärde):	1.051282051
F10.202 (medelvärde):	4.179487179
F10.212 (medelvärde)	3.974358974
	#VALUE!
F14.018 (medelvärde):	2.58974359
	0.358974359
F14.002 (medelvärde):	20.69230769
	#VALUE!
	5.102564103
F10.162 (medelvärde):	1.025641026
F10.167 (medelvärde):	2.307692308
	#VALUE!
F10.006 (medelvärde):	11.87179487
	0
F10.342 (medelvärde):	2.025641026
F10.343 (medelvärde):	5.820512821
F10.344 (medelvärde):	5.307692308
	1.794871795
	#VALUE!
F10.003 (medelvärde):	1.512820513
F11.019 (medelvärde):	0.641025641
F10.291 (medelvärde):	1.256410256
F10.031 (medelvärde):	0.076923077
F10.157 (medelvärde):	1
	0
	37.94871795
	#VALUE!
	45.43589744
	0.051282051
F10.098 (medelvärde):	8.153846154
	0
	#VALUE!
	0
F13.013(medelvärde):	1.358974359
	0
F10.219 (medelvärde):	0.102564103
	9
	#VALUE!