Procurement report D4.1.

Experiences achieved from the Procurements in WP4. and regulations linked to the measures.

Work Package 4 Sustainable Urban Mobility:

Barcelona

SMART SOLUTION 9.2 MICRO DISTRIBUTION OF FREIGHT

First procurement under measure 9.2:
A procurement is being prepared by the City Council of Barcelona for the contracting of a logistic company. A goods distribution company will be contracted in order to operate the last mile distribution from the transhipment point to the final customers located in the area of study with electric cargo bikes. This company will be responsible for operating the transhipment point, handling, classification and picking all boxes and packages received in the transhipment point to cargo bikes and riding the cargo bikes to the final customers. This company will have to report all the details about the daily performance of the distribution routes, demand orders, and potential incidents in the distribution operation.

The procurement is planned to be open from June 2015 to July 2015.
Currently, there are few companies specialized in operating the last mile distribution with cargobikes or electric cargobikes in Barcelona. At least, three companies will be invited to send an offer.

The measure proposed in the GrowSmarter concept specifies that this new service will be provided with electric cargo bikes (no emission vehicle). Therefore, traditional logistic service providers that are currently operating last mile distribution with diesel or hybrid vans do not fulfil the pilot specifications. This fact reduces the potential company candidates that may present a bid.

Regulations and permissions:
There are regulations concerning the usage of public space in order to operate the transhipment point and the time window in which the service will run.
Electric cargo bikes may be provided with a specific authorization by the City Council in order to run along those streets of the city in which there are access restrictions or streets devoted to pedestrians.

Amendments:
No need for any amendments.

Second procurement under measure 9.2:
Another procurement is being prepared by the City Council of Barcelona for renting all the staff needed to operate the transhipment terminal. The transhipment terminal will consist of two containers and a shelter. They can be rented to any construction work material provider and adapted to the operations to be running inside the transhipment terminal.

This procurement is planned to open from June 2015 to July 2015.

Regulations and permissions:
No need for any permits or the like.

Amendments:
No need for any amendments.

SMART SOLUTION 10.1 TRAFFIC MANAGEMENT THROUGH MFD

Procurement:
No procurement

Regulations and permissions:
No need for any permits or the like.

Amendments:
No need for any amendments.

SMART SOLUTION 11.1 DEVELOPING CHARGING INFRASTUCTURE

Procurement:
No procurement

Regulations and permissions:
No need for any permits or the like.

Amendments:
No need for any amendments.

SMART SOLUTION 11.2 E-MOBILITY MANAGEMENT SYSTEM

Procurement:
No procurement

Regulations and permissions:
No need for any permits or the like.

Amendments:
No need for any amendments.

SMART SOLUTION 11.3 CHARGING INFRASTUCTURE FOR ELECTRIC TRICYCLES

Procurement:
No procurement

Regulations and permissions:
No need for any permits or the like.

Amendments:
No need for any amendments.

SMART SOLUTION 11.6 SMALL DISTRIBUTION CNG GRID

Procurement

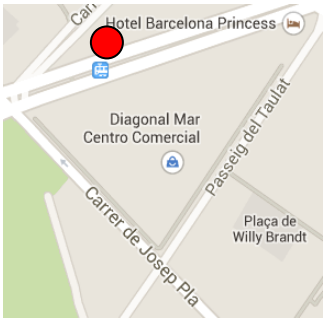
The main scope of this measure is the development of small distributed CNG station.
The station has been sized taking into account the business model and mobility issues inner city. These issues are: up to 50 vehicles charging per day; 90 cars and 30 light-duty vehicle.

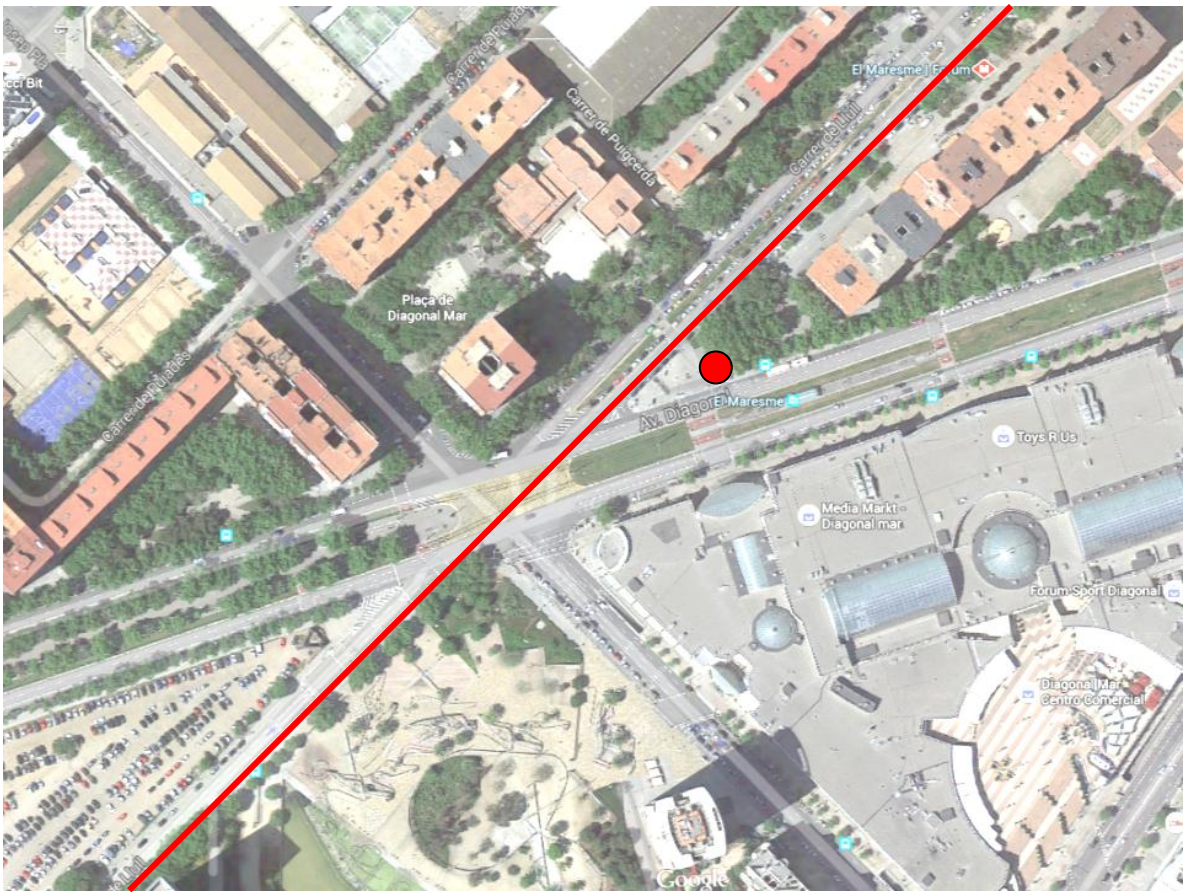
Respect to the impact of the measure basically it has been estimated an economical saving 135,000 €/year from user perspective and emissions savings: 142,000 kg/year CO2, 4,300kg/year NOX, 350kg/year PM10. A replacement of 290,700 litres/year of diesel fuel is estimated and 235,000 kg/year of CNG are expected to be consumed.

CNG station's main components are defined along different stages that are crossed by natural gas from the station inlet point until it enters into the vehicle gas tank at a pressure of 200bar at 15ºC. Main station components are: MRE (Measurement and Regulation Equipment), 1 Compressor of 60Nm3/h (30kW), a set of bottles with 1,600litres of storage capacity and 1 CNG dispenser.

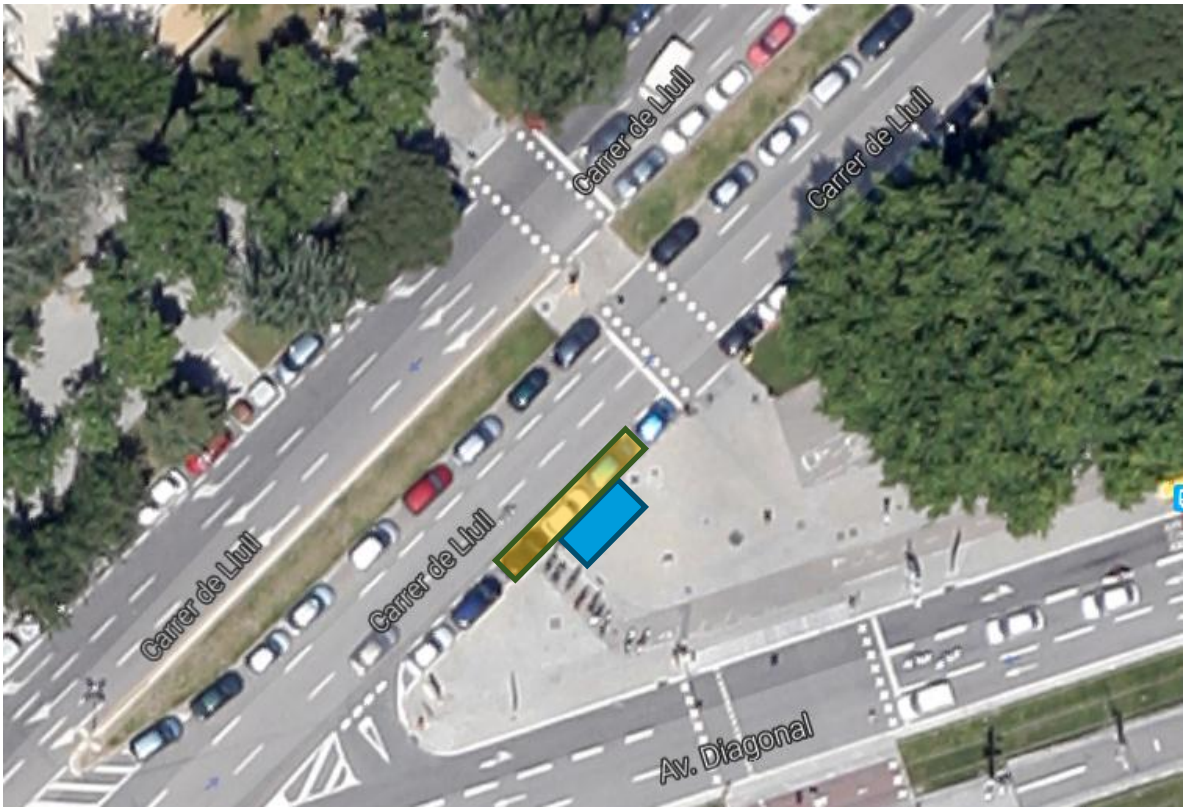
We assume that in an initial phase during the station exploitation vehicle's affluence will be moderated. Station performances will be the following:

> The first 3 light vehicles (18 kg gas tank) in a row will charge in less than 5 minutes each.
> For the following vehicles we will assure a maximum charging time of 15 minutes.
>
> The GNC station will be located in Barcelona city in the 22@ innovation and technological district. The station will be located close to Diagonal Mar commercial mall, in the intersection between Diagonal Avenue and Llull Street. A location map is provided below.





The following figure shows the station coordinates:



The main reasons for locating the station in this area are its proximity to *Diagonal Mar* commercial mall, and its strategic location really close from one of the more vehicles' dense urban route *B-10 Ronda Litoral.* Additionally high pressure gas pipe is located along Llull Street allowing an easier CNG station connection to the grid.

CNG stations do not have a significant environmental impact as it can be seen as follows:

- Noise and Vibrations: Compressor is installed inside an acoustic chamber, specially designed to work under actual and most strict regulations.
- Odor: Station emits neither smokes nor polluting gases. In very punctual moments it is possible that a small natural gas vent is released. In this case this amount of gas will be recovered and canalised to a secure zone.
- Water: Not required for station performance.
- Rolled traffic: Vehicle affluence is possible to be increased in station's vicinity.

"Gas Natural Servicios" defines 7 stages in its project management process for the solution Growsmarter and its measures. In this context, the procurement process begins once the basic technical specifications and the station site are defined. This characterization lets the definition of the technical specifications needed to start the bidding process that has different phases and ends with the selection of the subcontractors. These players are responsible for the development (detailed engineering) and implementation (construction) of the measures considered in the technical solution related to the technical specifications defined for the bidding process. The startup takes place after the construction, in the proper legal context.

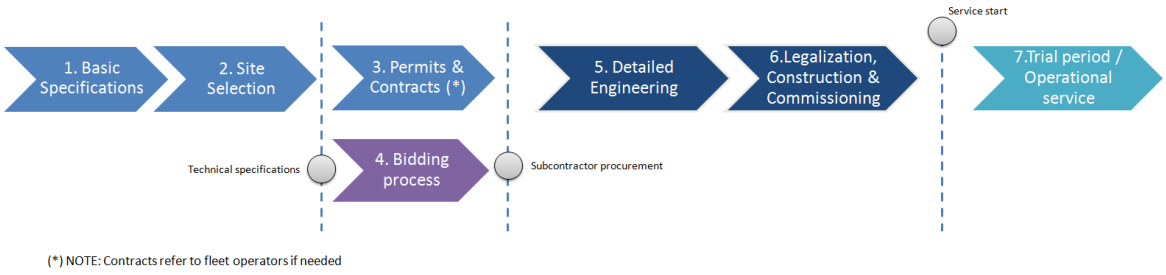


Figure 4: *Procurement process scheme for Gas Natural Servicios*

Under these lines, we add other details that can help to understand the procurement process of "Gas Natural Servicios":

The procurement period lasts around 5-7 months, starting from the end of site selection stage (this period of time is quite long because in parallel the required permits have their own process periods). The bidding process can begin when the technical specifications are published to let bidders provide their proposals (bids).

Although, "Gas Natural Servicios" has no public procurements, a similar approach is followed, and normally three bids are at least required.

Technical specifications are under development by our Engineering Department with the objective to define the exact technical solution for this measure that will be used as specification for the procurement process. Once the specification will be finished as well as the final location approved by the municipality we will open the bidding process period.

Regulations and permissions:
At this moment we are in conversations with the Barcelona City Council for getting its final approval to put in place the station in this public space. Once this formality will finish, permits and licenses to start the construction will be requested to the municipality as well as to infrastructure owners (natural gas and electricity connection to the grid are needed). Additionally, technical specifications are under development by our Engineering Department with the objective to define the exact technical solution for this measure.

Amendments:
As aforementioned, this measure does not have any significant variation in comparison to what it was proposed in the Grant Agreement, therefore, no amendments are needed.

SMART SOLUTION 12.5 CONVENTIONAL/PHEV/CNG VEHICLE-SHARING FLEET

Procurement:
No procurement

Regulations and permissions:
No need for any permits or the like.

Amendments:
No need for any amendments.

SMART SOLUTION 12.6 SMART TAXI STAND SYSTEM

Procurement:
A procurement is being prepared for contracting the provision of vehicle detection sensors at taxi stands and a digital information board. Since the procurement is under the process of getting started there are currently no detailed information.

This new procurement is needed to guarantee the success of the measure. This measure was initially conceived as the construction of new taxi stands (on-street) and huge taxi buffers located off-street. Taxi buffers are aimed at storing taxi vehicles at specific points without any annoyance to residents and consuming significant amounts of public space. When a taxi stand is going to be empty of taxis, the taxi dispatching centres will communicate with its affiliates in order to assign more taxis to the taxi stand. This conception was not compatible to sharing information about the occupancy of taxi stands with all taxi drivers.

In order to tackle this problem, this measure needs to sensor the occupancy of the taxi stand in real- time and communicate this information to all taxi drivers (without using the specific radio channels owned by each taxi dispatching centre). The first issue will require the provision of parking sensors (new procurement needed). Cellnex Telecom (partner) is able to

provide this service. The second issue will be addressed developing a new website (I2CAT partner) in which all information about taxi stands will be gathered.

Regulations and permissions:
No need for any permits or the like.

Amendments:
It's planned to create a mobile application in order to manage all the information concerning this measure.

Cologne introduction

The City of Cologne authorities are not involved in the procurement of the different public or private partner companies in work package 4.[1] Nevertheless, the city hall plays a key role for the implementation of the mobility concept.

If necessary, the city hall releases approvals for the different projects. It will be in the authority of the city hall to give permission to the different companies to use public ground or build new constructions. To foster a successful implementation of the project, the city hall decided to give priority to the GrowSmarter project during the permission process. During several meetings it was agreed to summarize the different needs and demands of the project partners on fact files.

For a fast and successful processing of the different appeals, the city hall asks the partners to bundle the different permission requests to comprehensive permissions appeals. The partners will receive individual permissions based on the requests.

It should be mentioned that there is a local decision of the city council that only 10% of public parking space can be dedicated to car sharing. This restriction was raised in March 2015 to 15 % in order to have better conditions for car sharing. This was promoted and supported by the GrowSmarter project team.

SMART SOLUTION (11.1): DEVELOPING CHARGING INFRASTRUCTURE (RHEINENERGIE, CAMBIO)

Procurement:
Task: Installation of charging stations (RheinEnergie, Cambio – public partner)
Procurements will be made for the measure 11.1 developing charging infrastructure:
This measure contains the procurement of charging stations for E-Cars/Cambio. The value is beneath the EU threshold for European tendering. The procurement has started. If required, the necessary information can be delivered once the procurement is finalized.

Procurement has been completed regarding the supplier for the e-bikes. The procured supplier is Lexbike. The total value for this procurement is underneath the EU threshold of 200.000 Euro according to Vergabe und Vertragsordnung für Leistung[2] (VOL). Only one offer was received and for the time being, amendments are not expected. The charging infrastructure for eBikes was not subject of discussions between the RheinEnergie and the KVB. However, in case such an infrastructure is required, procurement is not regarded as a problem.

Building permits are needed for the charging stations and this is authorized by the city council. The GrowSmarter Team tries to speed up this process for the GrowSmarter measures (see Cologne introduction on previous page)

[1] The KVB is a private company, but owned by the city of Cologne directly (10%) and indirectly over the public utilities company (90%).
[2] Procurement and contract procedures for supplies and services.

Regulations and permissions:
Building permits are needed for the charging stations. This is in the authority of the city hall. The GrowSmarter Team tries to speed up this process for the GrowSmarter measures.
(see Cologne introduction on previous page)

Amendments:
No need for any amendments.

SMART SOLUTION (12.3): MOBILITY HUB (LEAD: CITY OF COLOGNE, PARTNERS: KVB AND CAMBIO) INTEGRATING INNOVATIVE PARKING POLITICS WITH SMART BIKE POOLS / CITYBIKES, THREE MOBILITY HUBS – REDUCTION OF PRIVATE TRANSPORT

Tasks:
Bike sharing (KVB – public partner)
Integration of up to 50 e-bikes to the Hubs

Car Sharing (Cambio – private partner)
- Use of energy which is locally produced for electro mobility
- Up to 20 E-Cars at Hubs

Car parking management (ampido – private partner)
- Mobile app in order to book or reserve public parking space (or private parking space from citizens / commercial providers e.g. hotels, supermarkets)
- Dynamic pricing in regard to the traffic volume

Procurement:
The different private and public partners will do their procurement individually. The City of Cologne will grant building permits.

The KVB is a public company and therefore requested to do the procurements in accordance with the German and European laws. But the threshold of 200.000 Euro is not reached.

The procurement of a conventional Bikesharing system is complete. The procurement of up to 50 e-bikes and integration into the existing system starts as of October 2015. There was no direct procurement process necessary, because KVB worked together with a company for ordering the bikes, with which they worked together in another contexts.

Regulations and permissions:
Building permits are needed for the mobility hubs and authorized by the city council. The GrowSmarter Team intends to speed up the permitting process (se Cologne introduction on previous page). However, the team is restricted by legal regulations and political decision making.

Amendments:
No need for any amendments.

SMART SOLUTION (12. 4): ELECTRICAL AND CONVENTIONAL CAR SHARING (CAMBIO)

Conventional and alternatively fuelled vehicles (Cars) (Cambio – private partner)
- Use of energy which is locally produced for electro mobility
- Up to 20 E-Cars at Hubs

Procurement:
Cambio is a private partner and is therefore not subject to public permitting process. For the permits see introduction. All the permits in the transport sector are dealt with as a bundle in order to speed up the process (see Cologne introduction)

Regulations and permissions:
No need for any permits or the like.

Amendments:
No need for any amendments.

Stockholm

SMART SOLUTION 9.1 DEMONSTRATION OF LAST MILE DELIVERIES TO RETAILERS AND HOME-DELIVERY

Procurement:
No public procurement will be needed.

Regulations and permissions:
Building permits or any other permits are not needed for the service box installations. There is an information and negotiation process with tenants in the following buildings:

- IDLÅNGEN 3, Årsta (1 building) BEST 3
- SÄVLÅNGEN 1, Årsta (2 buildings) BEST 3
- SÄVLÅNGEN 2, Årsta (3 buildings) BEST 3

This information and dialogue process started in December 2014 with general info about the refurbishment project. More detailed information in written form and meetings has been arranged in March 2015 to all tenants. This time tenants got detailed info about the refurbishment and how it will affect their rent. The tenants are now forming a group for co-operation and negotiation. The rental negotiation process has started first with the general tenant association, thereafter the process will continue with the tenants group/tenant association. The rental negotiation process is planned to be finalized in June 2015.

Subcontractor to the partner Carrier will be needed for the distribution of the goods from the logistic centre to the service boxes with e-bikes. The subcontractor is MoveByBike. MoveByBike will own the service boxes and will be in charge of the last mile delivery of the goods from the logistic centre, operated by Carrier, to the service boxes. Subcontracting cost from Carrier to MoveByBike is € 92 500.

Amendments:
No need for any amendments.

SMART SOLUTION 10.3 TRAVEL DEMAND MANAGEMENT

Procurement:
No procurement

Regulations and permissions:
No need for any permits or the like.

Amendments:
No need for any amendments.

SMART SOLUTION 10.4 – TRAFFIC CONTROL SYSTEM FOR PASSENGER VEHICLES

Procurement:
No procurement

Regulations and permissions:
No need for any permits or the like.

Amendment:
Insero E-Mobility IEM) will add a linked third part Network of Automotive Excellence (NoAE) to measure 10.4

NoAE has been identified as a necessary third party to achieve the described targets within the measure. This is further supported by the signed LOI in relation to the application and the continued dialogue between IEM, NoAE and Stockholm in the negotiation process, project startup and participation of both parties at the Kick Off in Stockholm, February 2015.
The content of the work by NoAE include:

- Coordination and support with OEM in integration of the system from Stockholm into their systems
- Qualitative industry feedback and identification of possible similar application methods
- Support in the qualitative evaluation of the solution from an Automotive industry point of view.

The involvement of NoAE is necessary due to the following reasons:

- Efficiency – The Measure 10.4 will not be able to solve within the budget without NoAE as the collaboration and coordination with the OEM will demand significantly higher amounts of resources if handled by IEM
- Improved reliability of analysis – The knowledge, experience and network from NoAE will supply the process with an in-depth insight into how the Automotive industry considers the technology in focus and what development perspectives can be applied to the solution
- Increased dissemination of results – through the workshop with the automotive industry the results and methodologies from the GrowSmarter project will be fed to the industry creating a larger platform for involving companies in the further implementation of the action.

The Parties have collaborated strategically since 2011, where they key focus has been on bringing innovations in mobility from idea to market. Examples of these collaborations include:

- The 2013 Project Day Electromobility in Aachein in collaboration with RWTH Aachen and Streetscooter
- The Collaborative of Emerging OEM organization in collaboration with Streetscooter, ECOmove, Spijkstaal etc.
- GreenCities initiative including Copenhagen, Torino, Helmond and Dortmund among others
- A commercial assignment for Steinbeis India as a part of a EBTC project on Mobility Development in India based on case studies in Europe.

Organization number:
Insero E-Mobility: DK32654533
EWF Institute: DE131901625

The budget is to be adjusted for the beneficiary and the linked third (the split of the budget between the two) according to the following:

	Direct personal costs	Subcontracting	Other direct costs	Travel costs	Indirect costs	Total costs
IEM	54.375	0	0	2.500	14.218,75	71.093,75
NoAE	54.390	0	0	2.500	14.222,50	71.112,50

SMART SOLUTION 10.5 TRAFFIC SIGNALS SYNCRONIZED TO PRIORITIZE CERTAIN VEHICLE MOVEMENT OF GOODS

Procurement:
No procurement

Regulations and permissions:
No need for any permits or the like.

Amendments:
No need for any amendments.

SMART SOLUTION 11.1 – DEVELOPING CHARGING INFRASTUCTURE

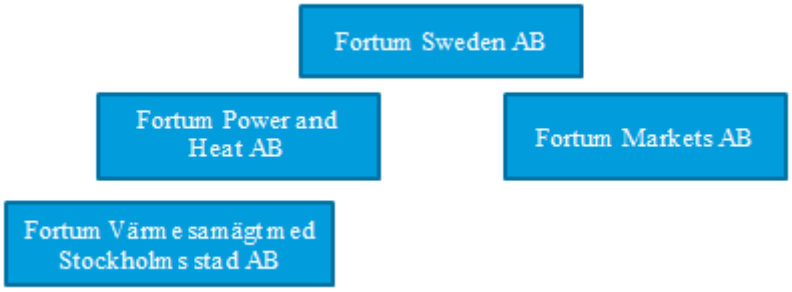
Procurement:
No procurement

Regulations and permissions:
Regarding the fast charger a signed contract (nyttjanderättsavtal) between Fortum Power and Heat (Fortum) and the City of Stockholm (Trafikkontoret) is required since Fortum wants to put the fast charger on land reserved for street use and owned by the City of Stockholm. An agreement regarding Fortums responsibility to provide the city with information regarding the usage and operation of the fast charger is also required. No building permits required.

Regarding the normal charging units there are no special regulations or permits required.

Amendments:
Fortum needs to add a new liked third partner Fortum Markets.

Fortum Sweden AB owns Fortum Power and Heat AB and Fortum Markets AB. Fortum Power and Heat AB owns 90,1% of Fortum Värme samägt med Stockholms stad AB until 2015. Starting from 2016 Fortum Power and Heat AB will own 50% of Fortum Värme samägt med Stockholms stad AB.



Organisation number:
Fortum Power and Heat AB: 556221-5623
Fortum Markets AB: 556549-0678
Fortum Värme samägt med Stockholms stad AB: 556016-9095

Info24 is included as an industrial partner and will report costs in measure 11.1

SMART SOLUTION 11.4 – SETTING UP REFUELLING FACILITIES FOR ALTERNATIVE HEAVY DUTY FUELS FUEL

The filling station for heavy trucks in Årsta will be in operation late 2015 or in the very beginning of 2016. Approximately another two stations will follow in the Stockholm area in 2016. After that it is estimated for two additional filling stations for heavy vehicles each year of the GrowSmarter project.

Procurement:
No procurement

Regulations and Permissions:
Adjustment of the current city plans (detaljplaner) will most likely be needed at a few of the locations.

Permits needed for the extension of the gas grid:

- Permit from the fire department including The Swedish Civil Contingencies Agency (Godkännande av brandmyndighet inkl. MSB)
- Permit for groundwork (marklov)

Permissions needed for a new filling station for heavy trucks:

- Permit according too environmental law. (miljöbalken)
- Permit to handle fuel for trucks at this station (hanteringstillstånd)
- Permit from the fire department including The Swedish Civil Contingencies Agency
- Building permit

Amendment:
An extension of the gas grid is needed in order to connect the new filling station for heavy trucks in Årsta with the existing gas grid. In this way biogas can be distributed to the station through the grid. This extension, along with a pre study for the layout of the grid, will be done by Stockholm Gas AB, a company 51 percent owned by the City of Stockholm.

Stockholm Gas AB needs to be included as a new liked third partner to the City of Stockholm. 120 000 € eligible costs will be allocated for Stockholm Gas AB from the City of Stockholm budget.

SMART SOLUTION 11.5 SMART GUIDING TO ALTERNTIVE FUEL STATIONS AND FAST CHARGING

Procurement:
No procurement

Regulations and permissions:
No need for any permits or the like.

Amendments:
KTH will be added as an industrial partner in this measure.

SMART SOLUTION 12.1 – GREEN PARKING INDEX IN COMBINATION WITH CAR-SHARING POOL WITH EVS

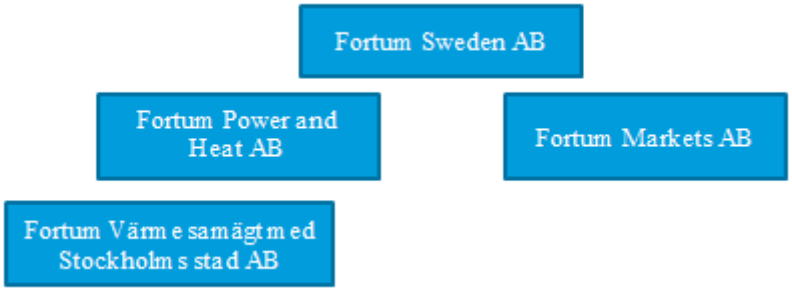
Procurement:
There will be a public procurement carried out by Stockholmshem in order to find a car-pool company to operate the car-pool for the tenants in the following buildings:
- IDLÅNGEN 3, Årsta (1 building) BEST 3
- SÄVLÅNGEN 1, Årsta (2 buildings) BEST 3
- SÄVLÅNGEN 2, Årsta (3 buildings) BEST 3

However, this will have to be done later on since the car-pool does not need to be in operation until the refurbishment is completed in 2017. This is due to the fact that there will not be any people living in the houses during the refurbishment – so there will be no use of a car-pool this early on.

Regulations and permissions:
No need for any permits or the like.

Amendments:
Fortum needs to add a new liked third partner Fortum Markets.

Fortum Sweden AB owns Fortum Power and Heat AB and Fortum Markets AB. Fortum Power and Heat AB owns 90,1% of Fortum Värme samägt med Stockholms stad AB until 2015. Starting from 2016 Fortum Power and Heat AB will own 50% of Fortum Värme samägt med Stockholms stad AB.



Organisation number:
Fortum Power and Heat AB: 556221-5623
Fortum Markets AB: 556549-0678
Fortum Värme samägt med Stockholms stad AB: 556016-9095

Info24 will be included as an industrial partner and report costs in measure 12.1

SMART SOLUTION 12.2 – ELECTRIC CARGO-BIKE POOL

Procurement:
There will be a public procurement carried out by Stockholmshem in order to find an electric cargo-bike pool company to facilitate the electric cargo-bike pool. Preferably this could be the same provider as the car-pool company in measure 12.1. However, this procurement will have to be done later on since the cargo-bike pool will be in operation first when the refurbishment is completed. This is due to the fact that there will not be any people living in the houses during the refurbishment – so there will be no use of cargo-bikes this early.

Regulations and permissions:
No need for any permits or the like.

Amendments:
No need for any amendments.