



Procurement of electric vehicles

Mörbylånga Municipality, Sweden

- Reduced CO₂ emissions
- Reduced noise from traffic



Old carfleet

- 24 fossil fuel vehicles.
- Approx. 20000 km/y for each car.

GPP tender

- electric vehicles
- good range
- high security

Results

- 24 electric vehicles.
- Energy saving 13 854 €/y.
- CO₂ reduction 62 tCO_{2e}/y.

Introduction to case

1.1 PITCH-TALK – SUMMARY

Mörbylånga Municipality is a small municipality in the southeast of Sweden. Despite being a small administrative unit with no experts in sustainable procurement or vehicles, they managed to replace 24 fossil fuel vehicles with 24 electric cars. With the support of its own steering documents, a true dedication, support and experience of other municipalities and stakeholders, a good working group that attended training and seminars - a small group of people succeeded to make major improvements.

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1.3 CASE CONTENT AND CASE ISSUE

The old contract for rental cars was about to expire and a contract for new vehicles had to be procured. The result from this procurement would have a major impact on the possibility to reach the goals for fossil free municipality with no fossil fuel for public transportation and therefore it was of great importance to carry out a sustainable public procurement for electric vehicles.

The following steps and decisions were carried out to achieve this good result:

- The purchasing policy required that the best fuels would be applied in the procurement of vehicles
- A lot of information was missing in order to define the needs in the organization so an inventory had to be carried out to find out how many cars they were using and how many that were included in the rental contract. A more detailed inventory was carried out to determine - driving pattern / mileage, fuel, age of the cars, which uses, where the car were parked during days and nights, contracts per car.
- All user groups were involved to describe their needs.
- An electric car was lent out to the different groups so they could test it, even during the winter conditions. The budget for climate measures was used to pay part of the monthly rates.
- All managers were invited on a regular basis to get information about the status and the results.

- The conclusions were that there were 120 vehicles in total and 60 of them were included in the rental contract. The utilization of each vehicle differed from 700 km/y to 10000 km/y, (this was a big wakeup call) most of them had a driving distance around 2000 km/year.

The decision was to make the following procurements:

- 1/3 would be fossil fuel vehicles – a joint procurement with Kalmar Municipality carried out 2015 (these cars had to be equipped in a way that no electric or biogas vehicles could manage)
- 1/3 would be electric vehicles – a leasing contract will be procured using the framework agreement from SKL Kommenthus
- 1/3 would be biogas vehicles – will be procured at the end of 2016 (the procurement will be carried out if an application for investment in biogas filling station is granted)



1.4 SOLUTIONS APPLIED

The municipality decided to use the national framework agreement for vehicles procured by SKL Kommentus AB. From that contract they made a renewed competition. Renewed competition is an ordering method that makes it possible to make a better deal for a specific order in which the procurers specify the volume/scope. Then contracts suppliers within the framework agreement compete again based on your needs.

Contract tendered

- Subject matter: 24 electric vehicles
- Value of the contract: 2 564 030 SEK ≈ 266 991 € leasing for 3 years (VAT excl.)
- Type of procedure: renewed competition from a national framework agreement, the offer had to be valid for 90 days.
- Type of contract: leasing
- Nature of contract: 3 years

Procurement objectives

The specific objectives for this procurement were:

- To reduce CO2 emission
- To reduce the use of fossil fuel

The vehicles had to have

- 5 stars in Euro NCAP
- A minimum range of 150 km during normal conditions in summer

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Since a national framework agreement was used a first selection of suppliers, as well as products and services had been made by SKL Kommunhus through their procurement. Therefore, the municipality could focus on the specific criteria's just for the type (size and electric) of vehicle that they wanted to procure.

Procurement approach

These were the following criteria's that the vehicles had to meet and fulfill

Equipment – must criteria

- The vehicle **must** be vehicle category BA1
- The vehicle's fuel **must** be 100% electricity
- A minimum range **must** be 50 km during normal conditions in summer
- Minimum Range years 1 and 3 **must** not deviate more than 15%
- The vehicle **must** be able to use both “fast chargers” and “normal chargers”
- The vehicle **must** have contact - type 2 or type 1 with adapter for type 22
- The vehicle **must** be equipped with CHAdeMO3 or CCS contact

¹ BA = small cars 3 and 5 doors (eg Golf)

² There are different types of electric car plug types and connectors currently available, the Eu stadard is Type 2, the Swedish standard SS-EN 62196-2.

- The vehicle **must** be equipped with portable charge-cable and contact that comes with the car
- The vehicle **must** have at least three passenger seats in addition to the driver's seat
- The vehicle **must** be equipped with 4 individual doors
- The vehicle **must** be equipped with PAH-free winter and summer tires on rims
- The vehicle **must** be equipped with ABS brakes
- The vehicle **must** be equipped with anti-spin
- The vehicle **must** have remote central locking
- The vehicle **must** be equipped with AC or similar
- The vehicle **must** be equipped with radio, power supply to the radio will be broken when the key is removed from the ignition lock
- Warranty on the battery **must** be valid throughout the whole leasing contract



Environmental criteria's – must criteria's

- The vehicle **must** fulfill the current governmental definition of clean vehicles
- The vehicle's tires **must** meet the requirements of the European Parliament and Council Regulation (EC) No 1907/2006 REACH so that the content of PAHs fulfills the requirements of Annex XVII (verified by certificate)
- Tire rolling resistance and wet grip **must** at least meet the following classes according to Regulation EC No 1222/2009 on labeling of tires regarding fuel efficiency and other essential parameters: energy efficiency and wet grip class C class B (verified by certificate)

Security criteria's – must criteria's

- The vehicle **must** meet the safety requirements for 5 stars in the Euro NCAP or equivalent test
- The vehicle **must** have three-point seatbelts and head restraints for all seating
- The vehicle **must** be equipped with first-aid kit and an approved reflective vest

Other criteria's – must criteria

- Each supplier **must** provide a short description of the tendering company

³ Two different suggestions for Charging Standard, CHAdeMO is the trade name of a quick charging method and Combined Charging System is the name of another a quick charging method, Tesla Super Charger is a third one.

- The delivery of the vehicles from the time of order **must** not be more than 16 weeks
- The bidder **must** conduct a short training and demonstration of the vehicle at the time of delivery (5 workplaces, at least one training at each site)
- The tenderer **must** enclose a proposed standard service
- Authorized service can be performed within 50km from Mörbylånga

Option - the municipality can choose to include or not

- Winter tires that meet the definition of snow tires in accordance with TSFS 2009: 19
- The vehicle is equipped with reverse sensor / camera
- The vehicle is equipped with systems for ecodriving that gives the driver feedback on how much energy that is used during driving
- The vehicle is equipped with GPS
- The vehicle is equipped with auto brake up to 30 km / h
- The vehicle is equipped with a detector for pedestrians

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Evaluation criteria

The tenders were evaluated by price and guaranties.

Price 90%

Guaranties 10%

The guaranties criteria's were not obligatory but they were used to evaluate the various offers against each other

- New car warranty should be valid for at least five years. 6 points
- Corrosion warranty should be valid for at least 10 years. 2 points
- Collision Damage Warranty should be valid for at least 3 years. 2 points

LCC

All suppliers had to use the LCC annex for the different vehicles included in their offers.

Criteria development

Mörbylånga municipality internal working group had the responsibility to develop the criteria. The working group consisted of the Sustainable Strategist, the economic controller and the Head of the environmental office – none of them with prior experience and knowledge of public procurement.

To get more information and to develop the criteria they

- Attended trainings from SKL Kommenthus, PRIMES and others
- Studied different tests for electric vehicles
- Consulted different organisations about different vehicles
- Through PRIMES TFI they got case studies from others and got in touch with other municipalities who willingly shared their experiences and procurement document.



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Results

This procurement resulted in that the new car fleet had zero emissions of CO₂. In this case study we? Only the estimated emissions from cars, i.e. not taken any emissions from the production of fuels into account. Electric cars have thus 0 CO₂ emissions.

	Investment volume (€)	Energy savings (€/year)	CO ₂ reduction (tCO _{2e} /year)
	266991 €	13 854 €/y	62 tCO _{2e} /year
Total	266991 €	13854 €	62 tCO _{2e} /y

Another positive outcome was that new knowledge is gained in the organisation. Both the working group, the managers and the user are very satisfied with the new vehicles.

Lessons learned

- There should be someone who manage the carfleet
- Prior vehicles were not purchase after the reel needs, but from worst case scenario"
- Let all users have their say, so you buy the right vehicles for the right need and user groups.

- Establish a system for strategic and good internal communication with users, managers and politicians
- To use national framework contracts feels secure since the first selection of suppliers and products/services are made – they are qualified and approved
- Let everyone in the working group attend to the same trainings and meeting as often as possible, then all will have the same values and understanding
- The support and help from other municipalities case studies makes a big difference – it saves time, increases the quality of the work and give a lot of inspiration

Additional lessons learned

- More savings can be done by settings up carpools – the next step for Mörbylånga
- Another way to improve the usage of the car fleet is digital tachographs – which also will be the next step for Mörbylånga

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About PRIMES

Across six countries in Europe; Denmark, Sweden, Latvia, Croatia, France and Italy, PRIMES project seeks to help municipalities overcome barriers in GPP processes, many of which lack capacity and knowledge.

PRIMES aims to develop basic skills and provide hands-on support for public purchasing organisations in order to overcome barriers and implement Green Public Purchasing. This will consequently result in energy savings and CO₂ reductions.– www.primes-eu.net

About GPP 2020



GPP 2020 aims to mainstream low-carbon procurement across Europe in support of the EU's goals to achieve a 20% reduction in greenhouse gas emissions, a 20% increase in the share of renewable energy and a 20% increase in energy efficiency by 2020.

To this end, GPP 2020 will implement more than 100 low-carbon tenders, which will directly result in substantial CO₂ savings. Moreover, GPP 2020 is running a capacity building programme that includes trainings and exchange. – www.gpp2020.eu



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