

# Can Energy supply companies play a role in local political energy savings programs?

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## Empirical outset in Carbon 20

- 7 Municipalities (Albertslund, Allerød, Ballerup, Copenhagen, Herning, Kolding and Naestved)
- Objective: engage 100 companies to lower GHG emission by 20%
  - Specific voluntary agreement on each company, including energy screening by energy consultant/-utilities
  - Forming of network
  - Addressing Climate aspect in different communications with local business
  - Foster that 20 companies go beyond optimisation and implementation of known solutions.
- Interview with the civil servants taking part in project as well as participating energy consultants

# Climate Agenda and Energy Efficiency

- IPCC 2007
  - Global warming is taking place
  - There is a need for actions to lower the release of Green House Gases (GHG)
  - Reduction of energy consumption is one of the most effective ways to cut GHG
  - The industrial sector possesses a big potential for improving their energy efficiency

## Energy Gap

- There often is a “gap” between potential cost-effective energy efficiency measures and measures actually implemented (Paton 2001, Jaffe, Stavins 1994)
- Several barriers especially for SME – Among others: (Thollander, Danestig & Rohdin 2007, ECEEE 2012)
  - lack of time or other priorities (including for capital investment)
  - lack of access to capital/funding
  - cost of production disruption
  - Energy efficiency calls for a variety of different skills often not present in SME.
  - Energy cost (although risen in recent years) is not a significant element of SME’s expenditure

## Need political action / facilitation

- These gaps calls for political actions to facilitate the implementation of efficient energy savings
- Several programs exist, but often mainly targeting the heavy energy users why there often is a untapped potential in SME (Thollander, Dotzauer 2010, Bradford, Fraser 2008)

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## Political action addressing (also) SME

### Two trends:

- Energy saving obligations for Energy Utilities
  - Several literature and evaluations (Giraudet, Quirion 2008, Friedman, Bird & Barbose 2009, Bertoldi et al. 2010, Child et al. 2008, ECEEE 2012, Togeby et al. 2009)
  - Among others conclude that they are highly effective also in addressing SME through targeted counselling
- Local Energy efficiency programs target local SME
  - Fewer but still plenty evaluations (e.g. UK and Sweden in respectively Bradford, Fraser 2008 and Thollander, Dotzauer 2010,)
  - Among others conclude that often need to provide a energy screening free of charge and engage in follow up facilitation to help implementation
- Carbon 20 and this paper addresses the combination of those
  - Can the national (DK) obligations for energy utilities for saving energy at end-users be utilised locally to set up a facilitating scheme for local SM



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# Energy Obligations for Energy Utilities or White certificates

- Several countries have established obligations for their Energy Utilities to save Energy at end-users
  - In EU among others: UK, France, Italy and Belgium/Flanders
- Generally principals (ECEEE 20012):
  - Part of the energy utilities has an obligation to save energy in eligible end use customers (either to the energy retailer or the distributor)
  - If retailers the cost of saving normal part of general market price for energy, whereas the cost often statet when targets provided distributors
  - If they fail to deliver those energy savings, the company will incur financial penalties.
  - not restricted to savings from own customers
  - The target for the particular energy company is related to its market share in the volume of energy supplied or distributed by it.
  - The companies can shell and by earth others savings





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# The Danish Energy saving obligation system (Togeby et. Al 2009)

- Obligation given to distributer(s), who then distribute to retailers according to market share (for some subsectors the target is more a political agreement, than actual legal obligations)
- The scheme (thus) not primarily based on penalties for not receiving the targets, but instead financial rewards mechanism to cover cost
- As part of general energy bill, customers pay certain amount pr. Kwh targeted energy savings, which among others funds the Energy utilities cost for achieving their obligations
- Established a market for Energy savings, where companies and end-users can get subsidy for their savings (however rather opaque)
- Today most of the energy utilities savings obligations do actually not rely on their own active consulting, but is mainly brought from installers, insulators, electricians etc. whereas several actually have abandoned having specific energy consultancy units.





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# Energy consultants general concept for screenings

- Offer screenings to companies for approx. 1000-1500 EURO
  - If companies chose to implement, with help from consultants they get subsidy pr. Kwh energy savings
- Energy utilities (still some)
  - main interest is the realisation of savings
  - use the screening as a platform to get in dialog with companies about savings potentials and first make agreement afterwards on specific savings including any subsidy
  - Cost of screening is to cover own cost
  - Earlier had concept where screening free of charge, but with restriction so that the subsidy for the savings will fall on the energy utility and not the company
    - abandoned this cause disputes amount the subsidy as well as experienced that the lack of payment also provided lack of commitment
- Other consultants
  - Primary interested in selling their hardware and thus use the screening as platform to identify solutions that need hardware change
  - The screening is also a platform, but rather for selling hardware to the identified savings, but still include possibility for subsidy, but mostly as element to get the companies on board

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# The Specific voluntary agreement on each company in Carbon 20

- Municipalities makes a first visitation and dialog about possible focus areas, and companies commit to a 20% reduction targets
- Energy consultants makes a screening free of charge for the companies
- The municipalities help the companies to establish an action plan for the implementation of identified savings
- The municipalities monitors the implementations during the project period (end 2013)

## The Energy screening in Carbon 20

- Interred agreements with 8 consultancies to conducts these screenings, covering both:
  - Energy utilities subject for the national savings obligations,
  - Other Energy consultancies that uses the energy screening as platform to promote and sell hardware solutions
- Offer companies screening free of charge, but compensated by the project with approximate 700 EURO unless certain criteria are fulfilled - varying from case to case but e.g.:
  - Whether companies do continue collaboration with consultant for implementation and reporting of savings to national scheme
  - The size of the companies (no business perspectives for the smallest)
  - Geographical area / travel distance to perform the screenings

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# Reasons for energy consultant to join Carbon 20

- Energy utilities
  - Hope for savings to report as part of their obligations
  - However emphasis that not prime objectives – rather to gain close cooperation with the municipalities and be present locally and brand themselves in local networks on energy etc.
  - Therefore also perform the screening at no or reduced cost
- Other Consultants
  - Not interested in savings for the sake of obligations
  - See participation as option for broaden their dialog with several potential customers for their hardware solutions
  - As the municipalities have made the general contact, they save some preliminary advocating and thus offers the screening free of charge, but do ask (reduced) compensation for very small companies, that doesn't consider potential customers
  - Use possibility for subsidy as extra bonus to convince them to implement savings

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# Preliminary experiences energy consultants from Carbon 20

- Stresses, that it generally provide a better success rates when companies have paid up front
- Acknowledge that this up-front payment naturally constrains especially smaller companies from getting involved.
- However prefers to work with a smaller amount where the rates of success are better than having a bigger pool with little actual saving potentials.
- stresses that the cost of having this consultancy, and providing it for no or reduced cost means that they cannot offer the same subsidy for the savings as some of the others actors

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# Preliminary experiences energy consultants from Carbon 20 II

- So far haven't experienced a big uptake and sceptical that the companies will follow up
- hope that the "commitment" in the Carbon20 will compensate the lack of up front payment.
- Emphasis that early in project and long decision process as several actors involved.
- A blurred picture in terms of who is actually in charge of following up.
- the Carbon 20 project should be seen as a pilot project with room for improvement
- It is crucial that a potential continuing established a set-up with a much clearer business case for the consultancies.

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# Preliminary experiences Carbon 20 Civil servants in cooperation Energy consultants

- Emphasizes that the use of Energy Consultants has mainly functioned well.
  - Useful to follow the screenings and gained practical experiences.
  - the delivered screenings report have been of good.
- However it has been a rather blurred and frustrating process
  - both to understand the concept of the energy savings obligations and the energy consultants involvement in Carbon 20
  - to reach a clear and joint understanding of the different agreements interred in terms of compensation, cooperation and responsibilities.
- Some experienced that energy consultants are reluctant to work with the smaller companies.
  - In Carbon 20 do perform screenings, but solely here.



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# Preliminary experiences Carbon 20 Civil servants in cooperation Energy consultants II

- Emphasises that after Carbon 20, the municipalities will not be able to fund the screenings
- Need find new model
- Especially a challenge in respect to find a model targeting the smaller firms.
  - While smaller companies often poses rather low saving potential individual
  - They actually often ads up to constitute a major part of the actual used energy in the business sector.

## Conclusions

- All actors do have a profound and shared interest in a collaboration and development of a common scheme
  - However the current agreements doesn't quite seems to induce the full potentials
- Several different evaluations of Energy savings obligation has pointed at the specific counselling of SMEs as one of the attributes of these energy saving obligations.
  - However, this investigation shows that the scheme in Denmark fails to address the smallest companies with solutions that fit their needs and constraints
  - A challenge still exists in figuring out how to find a solution for the smaller business, that only have little energy saving potentials as well as limited interest and capabilities for using time and man-power resources.

## Conclusions II

- Question raised in the title: Can energy supply companies play a role in local energy savings programs?
  - The simple answer is: YES, they can.
  - However, it does require a closer assessment of how to set-up the scheme in order to secure that the different interests are accommodated so win-win-win situations are established
- The latest Carbon 20 monitoring report (not yet published) recommended to address how to expand and consolidate the future cooperation and specifically address how to target the small companies.

## Perspectives

- While out of scope to present solutions some ideas for further discussions:
  - A closer cooperation and exchange of knowledge about specific companies
  - A recast of a no-cure, no-pay counselling
  - Use the calculated average data from the dwellings and household sector for SME
  - Municipalities pools similar small companies located close to each others in similar settings in order facilitate a economies of scale, “fast and dirty” screening of several similar companies.