Voluntary Agreement Scheme for Industries in Denmark

Jette Ellegaard Vejen,
Special Advicer
Danish Energy Agency
History of Danish VA*-scheme

1992
- CO₂ tax introduced
- All companies

1996
- VA-scheme, Reduced CO₂ tax, and investment grant
- Specific industrial processes

2000
- Extended scope
- Space heating

2010
- Changed scope
- Only electricity

2013
- VA-scheme ends

2015
- VA-scheme reintroduced
- Only electricity

* Voluntary Agreement
Elements of the VA-scheme

To get an agreement the company must:

1. Be certified by ISO 50001 energy management system + DEA additional requirements (procurement, design, reporting)
2. Implement energy saving project with a pay back time up to 5 years
3. Examine special investigations for energy efficiency (mandatory areas + inspiration from DEA)
4. Send a yearly report to DEA regarding progress on energy saving projects (completed and new ones), energy consumption etc.

- DEA and the company negotiate the conditions of agreement
- Agreement will be signed by both parties
- An agreement last up to 3 years
- In return the companies get a subsidy to their electricity tax of up to 85% of the tax (2018 ~ 0.13 EURO/kWh)
- If requirements are not met, the subsidy must be paid back

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Results - evaluations

<table>
<thead>
<tr>
<th>Evaluation made by different consultants</th>
<th>COWI, 2005</th>
<th>HHS Teknik, 2013</th>
<th>Andersen and Petersen, 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final energy consumption, DK</td>
<td>PJ 666</td>
<td>633</td>
<td>611</td>
</tr>
<tr>
<td>Energy consumption, total manufacturing industry</td>
<td>PJ 113</td>
<td>96</td>
<td>85</td>
</tr>
<tr>
<td>- share of DK energy cons.</td>
<td>% 17</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>Energy consumption, VA-companies</td>
<td>PJ 58</td>
<td>45</td>
<td>59</td>
</tr>
<tr>
<td>- share of manu. industry energy cons.</td>
<td>% 51</td>
<td>47</td>
<td>69</td>
</tr>
<tr>
<td>- share of DK energy cons.</td>
<td>% 9</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Obtained energy savings</td>
<td>PJ 2.8</td>
<td>2.4</td>
<td>3.3</td>
</tr>
<tr>
<td>- share of energy cons., VA-companies</td>
<td>% 5</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
Key-points from the Danish experiences

- Set requirements to companies – instructions and requirements towards which energy saving projects to implement.
- The VA-scheme must comprise a strong economic incentive like tax reduction to make the companies join the scheme.
- A well-managed VA-scheme requires a dedicated team at the managing authority for continued follow-up, control, and development.
- Evaluate regularly in order to improve and develop the VA-scheme.
- The authority should take lead in identifying and developing new approaches, findings, and technologies, and these should be promoted continuously to the companies.
- Keep close dialogue with industries and industrial experts to understand new agendas, challenges, and ways to integrate energy efficiency activities with company life.
- Surveys and data platforms are crucial to identify energy saving potentials and manage priority of new focus areas.

These key points are often referred to as a combination of “carrot and stick”.