



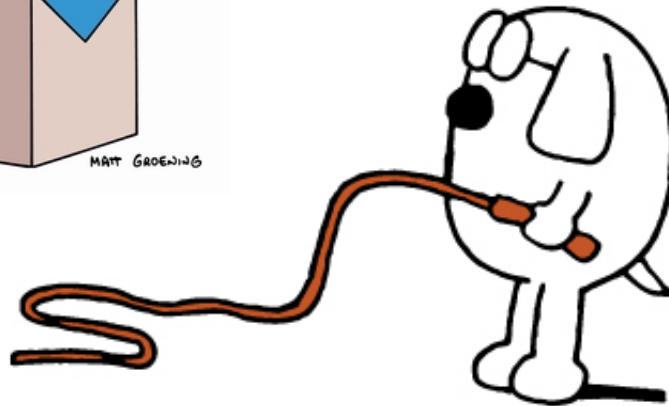
Experiences with Voluntary Agreements Lessons Learned from The Netherlands

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How do we affect change?





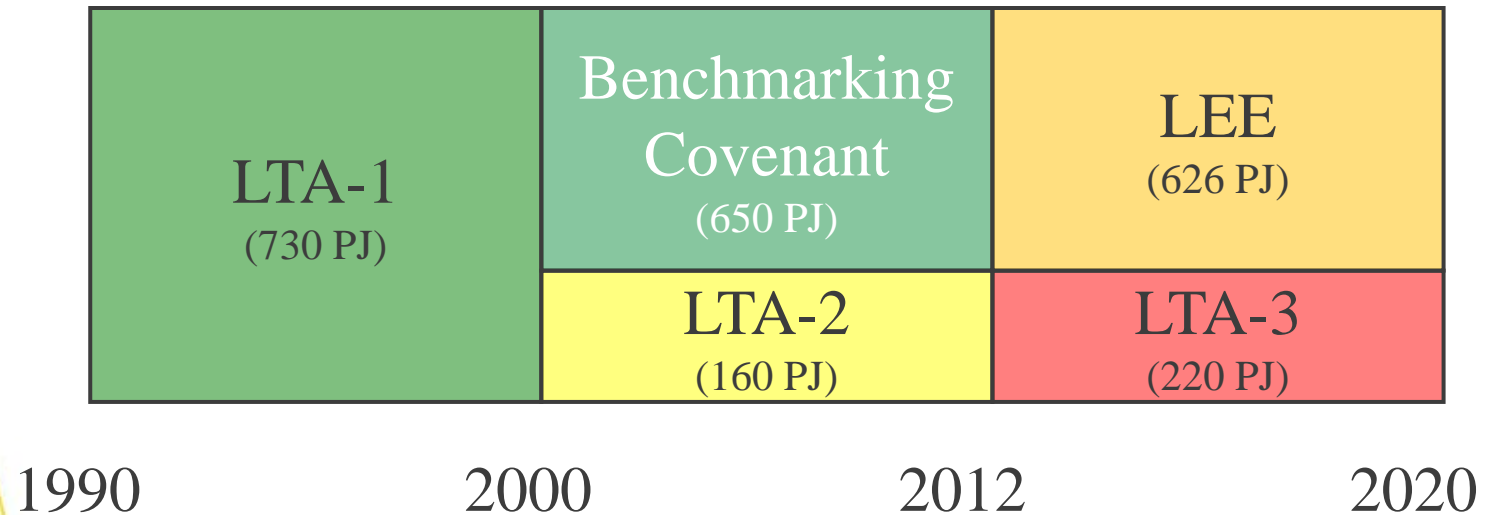
Seven golden rules for voluntary agreements

- **Strong negotiation position of the public authority**
- **Clear targets and timetables**
- **Long-lasting government support**
- **Small number of participants (reduce risk of free riders)**
- **Physical energy efficiency monitoring**
- **Clear monitoring guidelines**
- **Independent verification**



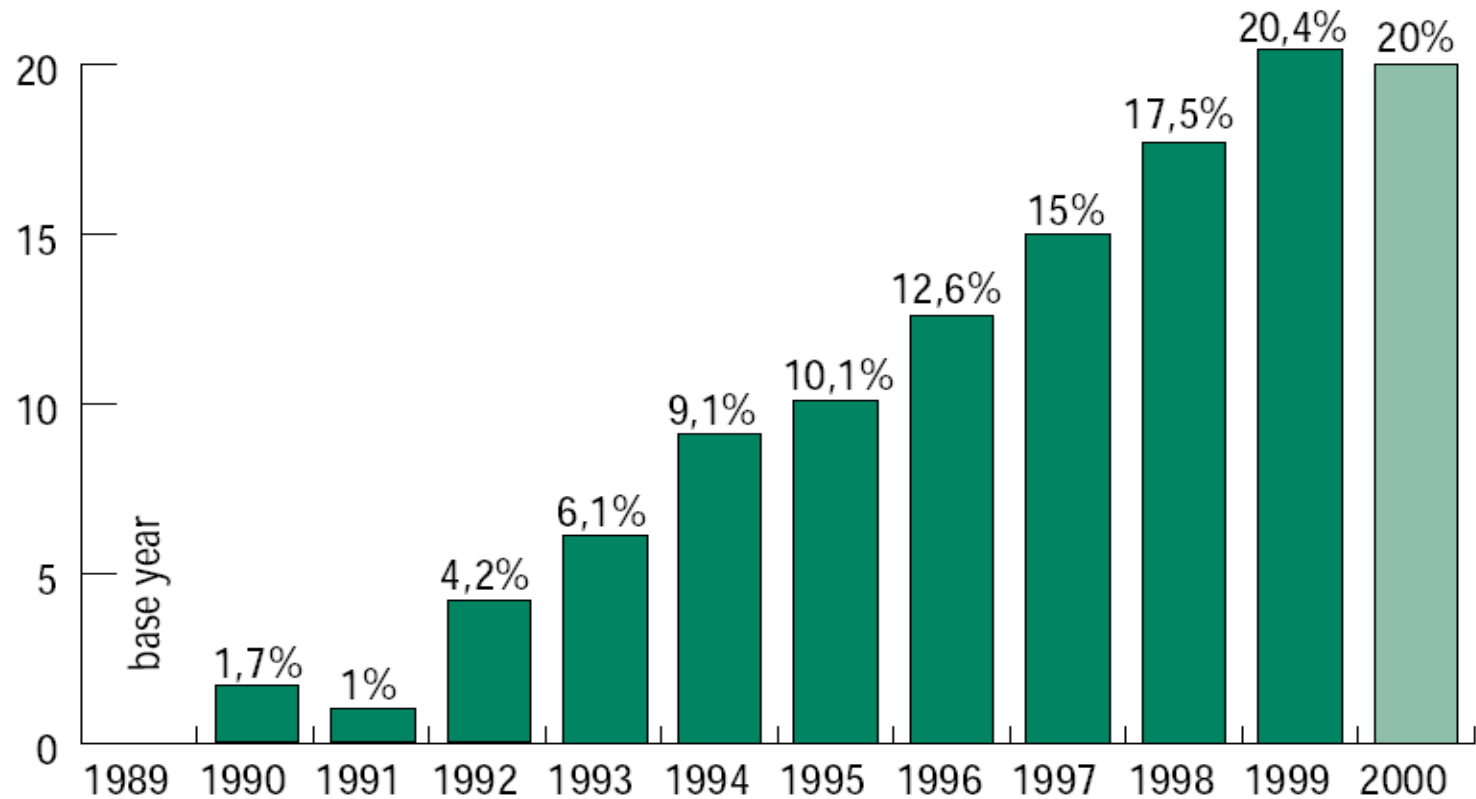


Long-term Experience with Voluntary Agreements in the Netherlands



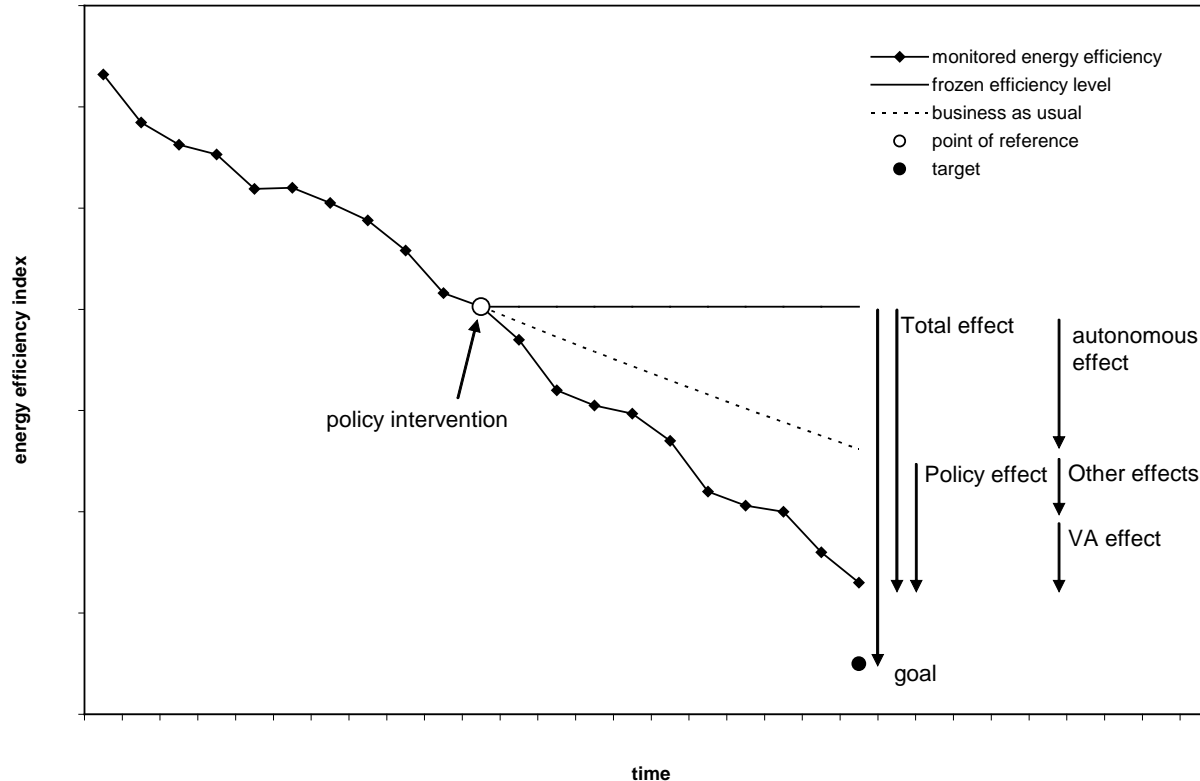


LTA-1: Energy Efficiency Improvement





LTA-1: The effectiveness of the VAs



- 25 - 50% of the total energy efficiency improvement due to LTA-1
- Without LTA-1, improvement rate would have been between 0.9 and 1.3%/year, instead of 1.8%/year
- National energy statistics shows lower efficiency improvement rates than LTA-reporting (Neelis et al., 2007)



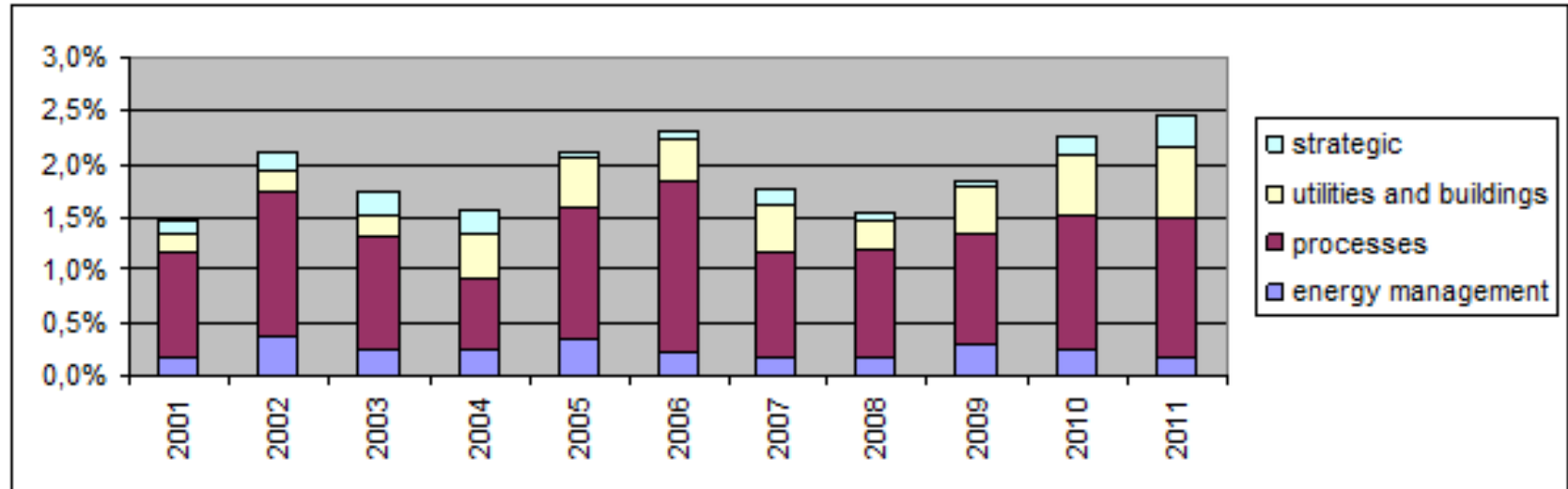
Benchmarking Covenant (2000- 2008)

- Based on assumption that LTA-1 goals were too ambitious for another 10 years
- Participating companies had to demonstrate that they belonged to the top-10% most efficient companies in the world through benchmarking
- Emission Trading (ETS) introduced in 2005
- Energy efficiency improvement rates went down to 0.5-0.8%/year
- Benchmarking covenant was suspended in 2008





LTA-2 & 3 – Results 2006-2011



Source: Abeelen et al., 2013

Realized savings independent of:

- Size company
- Participation in ETS
- Certification for environmental management (ISO 14.000)
- Energy Prices (but may have a delayed effect)



How did the companies realize energy savings?

- Analysis of 12,000 projects of 904 companies participating in LTA-3 or LEE in period 2009-2012
- All projects with a simple payback period <5 years have to be implemented
- Companies submit an energy efficiency plan (EEP)
- Observations:
 - Large differences between planned and realized savings
 - Huge variation in observed payback periods
 - No correlation of implementation rate and payback period
 - Suggesting that other motives than energy payback are driving actual investments



Savings of analysed projects (2009-2012)

Category	Certainty level			Total	Share
	Certain	Conditional	Uncertain		
Process Efficiency	10.801	6.307	4.931	22.039	53%
Energy management	1.161	483	200	1.845	4%
Utilities and buildings	3.146	2.352	1.084	6.582	16%
Adjustments in processes	4.762	3.384	3.135	11.282	27%
Strategic measures	1.728	87	511	2.326	6%
Other/unknown	4	0	0	4	0%
Chain Efficiency	1.966	1.190	1.824	4.980	12%
Reduction of raw materials	1.260	318	434	2.011	5%
Optimisation of distribution	135	54	27	216	1%
Improving product performance	83	170	526	779	2%
Lifetime extension	5	12	0	16	0%
Optimisation of disposal and re-use	271	120	158	549	1%
On site cooperation	107	113	208	428	1%
Energy performance of product	106	403	471	980	2%
Renewable Energy	5.762	4.106	5.073	14.941	36%
Energy from waste and biomass	436	1.169	2.068	3.673	9%
Purchase of renewable electricity	5.185	2.804	244	8.233	20%
Ambient heat	130	121	26	378	1%
Water power	1	0	0	1	0%
Wind power	5	3	518	525	1%
Solar power	4	3	104	111	0%
Solar heat	1	5	2.013	2.020	5%
Total	18.529	11.602	11.828	41.960	100%
	44%	28%	28%	100%	



Lessons learned from LTAs in The Netherlands

- Clearly defined targets necessary:
 - LTA-1: Fairly ambitious targets
 - Benchmarking: no clear targets
- Strong support policies needed, next to the agreement
- Limited sanctions for non-compliance were ineffective
- Loopholes in the monitoring system
 - May explain different results when comparing to national statistics
- Weak verification
- Emission trading did not support energy efficiency innovation (although low allowance prices may affect results)



Conclusions

- The seven gold rules still apply!
- Focus needed on:
 - Strong capacity public authority in negotiating targets
 - Clear and unambiguous targets
 - Clear monitoring guidelines
 - Independent verification of monitoring
 - Tailored instruments to assist participants
 - Strict sanctions for non-compliance
- Unclear understanding of investment drivers supports the flexibility offered by a VA
- Better understanding of investment behaviour may improve effectiveness of policy instruments
- Emission trading alone does not support energy efficiency



Thank you for your attention

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