

“Once upon a time in the west...”

The Dutch Environment of Industrial Energy Efficiency Improvement and Sustainability

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20th Reform Group Meeting Salzburg

August 31-September 5 2015

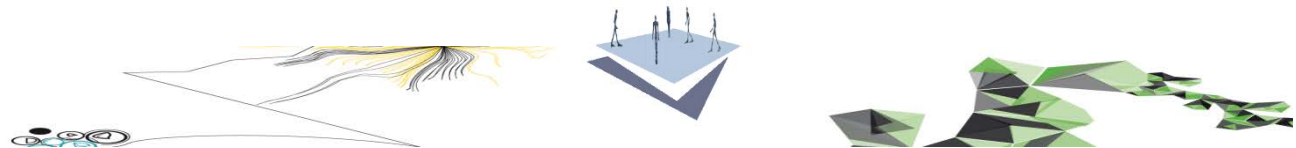


Dutch position in Europe

1995



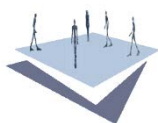
2015



Ranking Energy consumption per unit GDP (energy productivity)

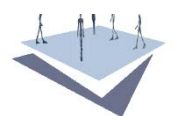
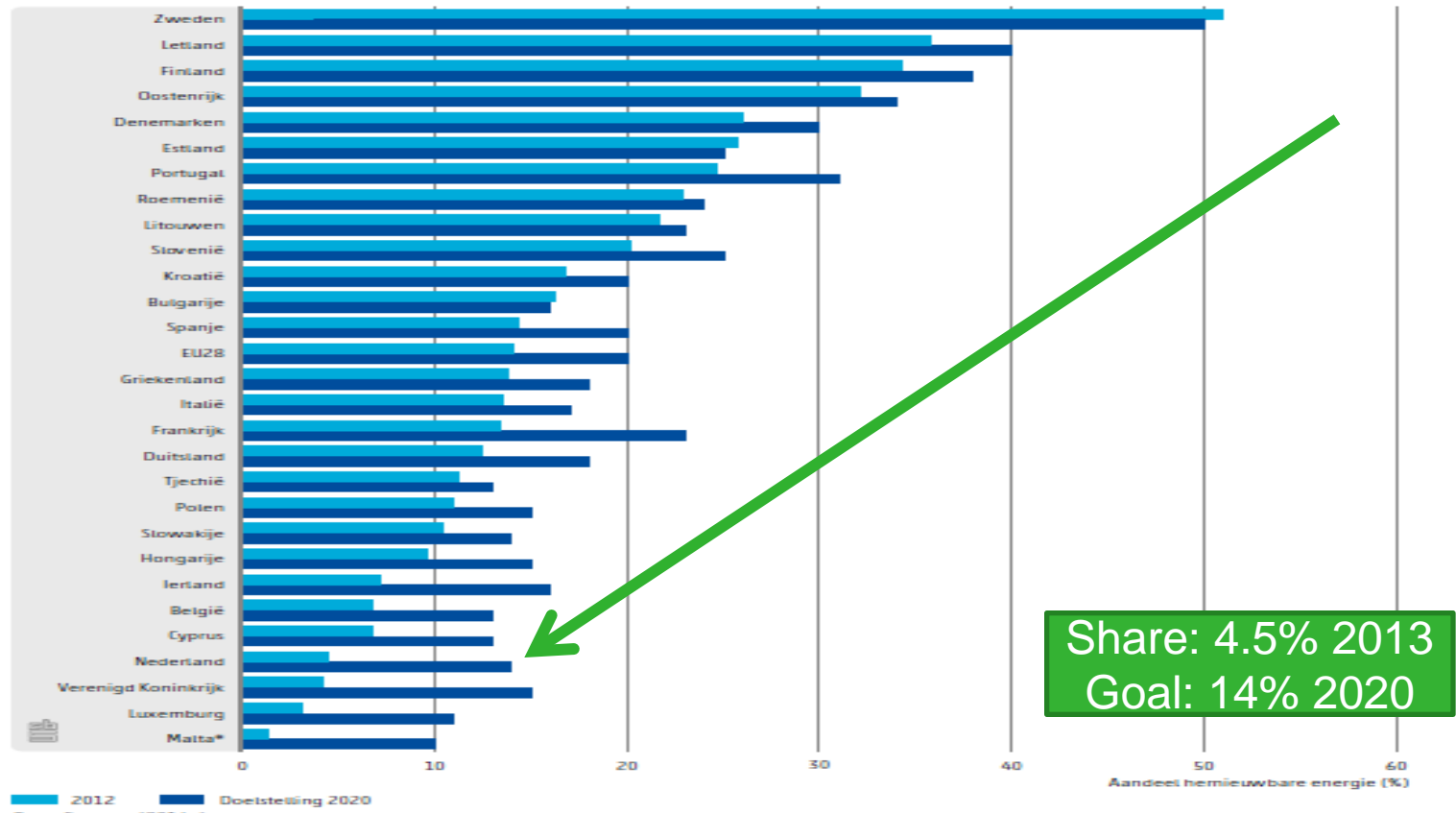
Onderwerpen	Ecologische duurzaamheid																		
	Energieverbruik per eenheid bbp																		
Perioden	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Landen	kg olie-equivalent per 1 000 euro bbp																		
Australië	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
België	268	222	231	224	224	218	211	208	197	206	198	194	187	178	184	185	191	182	.
Canada	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Denemarken	123	120	133	120	115	108	102	104	101	105	100	95	99	95	89	97	94	91	.
Duitsland	175	174	178	174	170	163	159	161	158	160	158	156	151	143	142	143	142	129	.
Finland	295	270	281	274	264	253	238	239	247	255	248	223	233	219	209	216	225	212	.
Frankrijk	171	174	182	173	172	167	163	165	164	165	163	161	155	150	151	149	152	143	.
Hongarije	.	420	429	409	388	373	350	345	331	325	307	312	298	292	288	292	295	283	.
Ierland	.	137	131	124	123	117	111	112	107	101	98	93	90	88	91	91	93	83	.
Italië	128	131	130	129	131	131	129	127	126	132	131	131	127	124	123	122	124	121	.
Japan	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Nederland	187	186	187	175	170	162	159	161	161	165	164	161	151	156	149	151	158	147	.
Oostenrijk	139	141	147	143	140	134	129	135	134	140	139	140	136	129	128	126	132	126	.
Polen	.	620	606	558	498	464	428	426	414	409	390	381	377	351	340	322	331	318	.
Spanje	162	161	155	159	160	160	160	158	159	159	161	159	153	149	144	137	137	136	.
Tsjechië	.	533	526	534	518	477	482	480	474	477	467	433	414	391	371	364	375	356	.
Verenigd Koninkrijk	171	166	168	157	154	150	145	142	135	132	129	126	122	113	113	111	112	104	.
Verenigde Staten	241	239	235	228	220	216	213	206	205	201	198	193	186	186	181	177	.	.	.
Zuid-Korea	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Zweden	235	229	231	219	214	201	182	191	191	183	182	173	162	156	156	151	159	149	.

8th position
In 2011



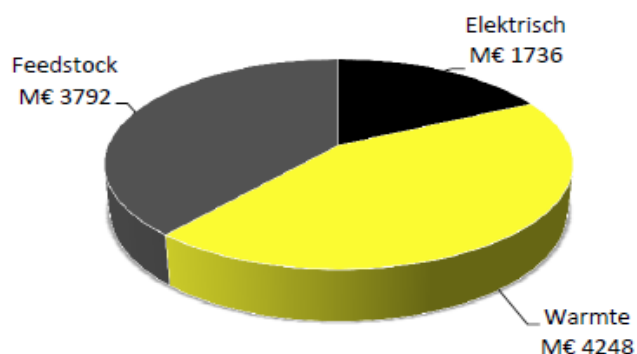
Ranking RES share in gross energy consumption

2.5.1 Aandeel hernieuwbare energie in bruto energetisch eindverbruik

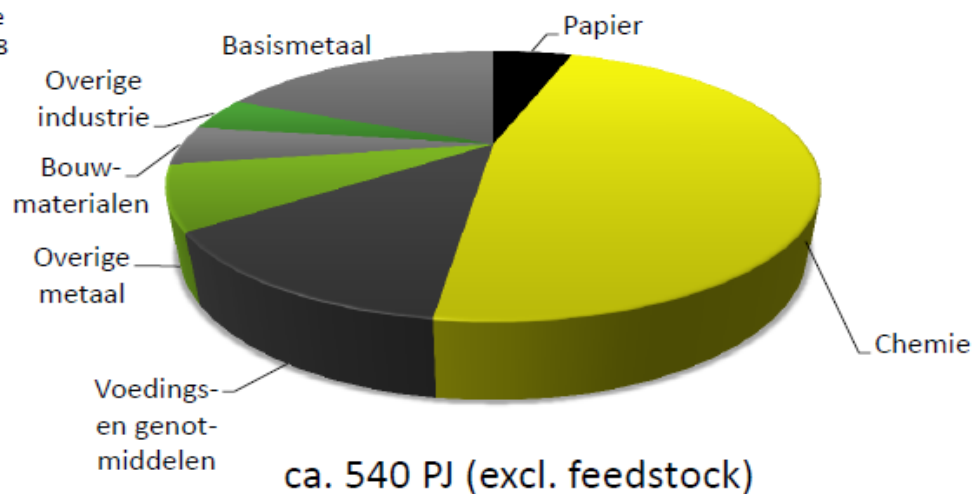


Dutch Industrial Energy Consumption

Nederlands industrieel energiegebruik



- Een economische waarde van ca. 6 miljard euro per jaar
- Jaarlijks wordt ca. 1% bespaard (= 60 miljoen euro)



Industrial Networks energy efficiency and sustainability

- Chain based (Energy efficiency obligation)
- Product based (recovery/reuse of waste, materials)
- Area based (Rotterdam Climate Initiative)
- Problem based (animal manure processing)
- Policy based
 - National Agreements Industrial energy efficiency
 - Sector based networks
 - Green deals
 - Initiates solution oriented networks
 - National Energy agreement 2013
 - Ambition initiated networks



Area based



ROTTERDAM.**CLIMATE**.INITIATIVE

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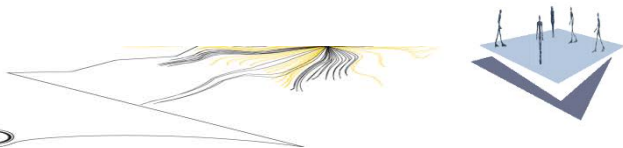
Stad



Haven

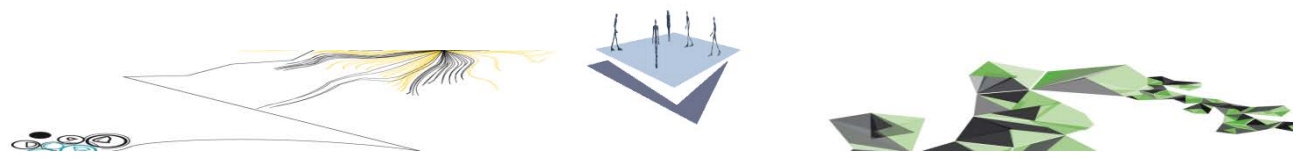
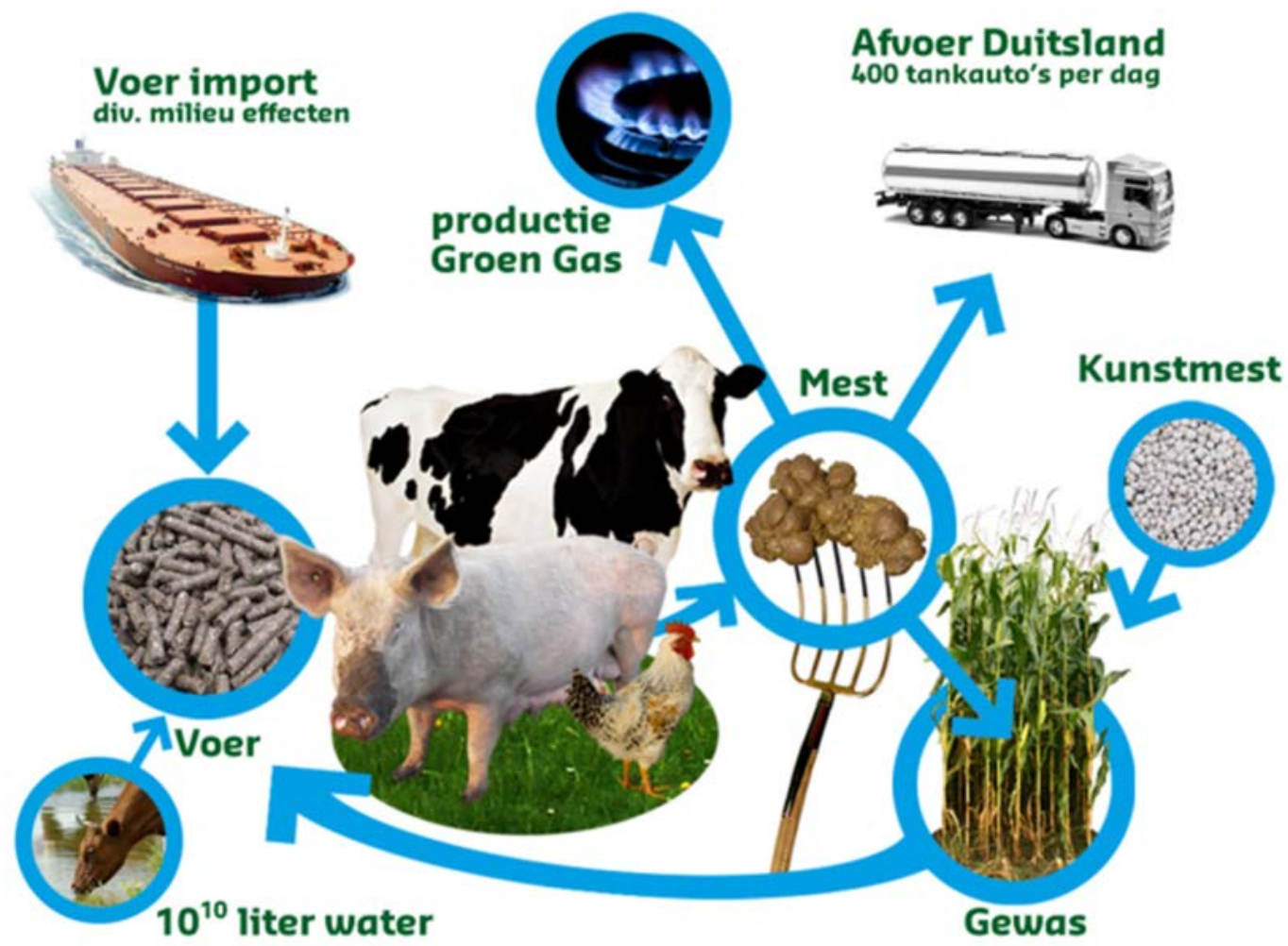


Industrie



UNIVERSITY OF TWENTE.

Problem based network



Policy initiated networks: Sector based long term agreements

- Period 1992-2020
- Voluntary agreements on energy efficiency improvements Governments:
 - Industry (with and without ETS)
 - Agriculture
 - Services
- Currently MJA-3: 2008-2020



Goal

- Industry makes an effort of 30% energy-efficiency improvement in the period 2005-2020

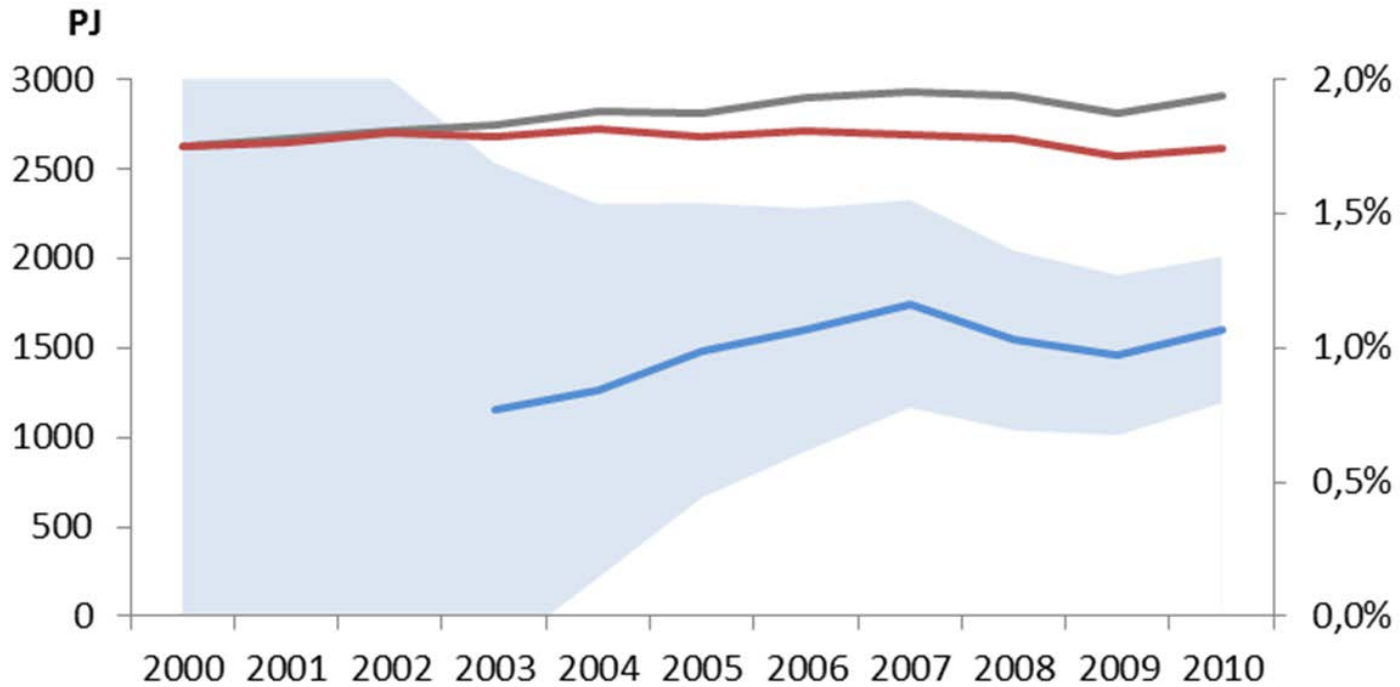


Framework

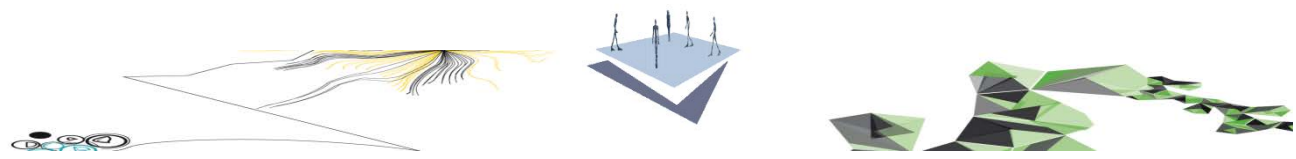
- Company based energy efficiency plans: design, implemented, monitored and reported
- Annual monitoring and reporting of energy consumption
- Implementation company based energy management system
- Sector: roadmaps energy efficiency 2030
- Government: facilitating platform, implementation organisation, financial support



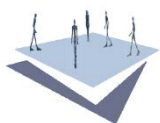
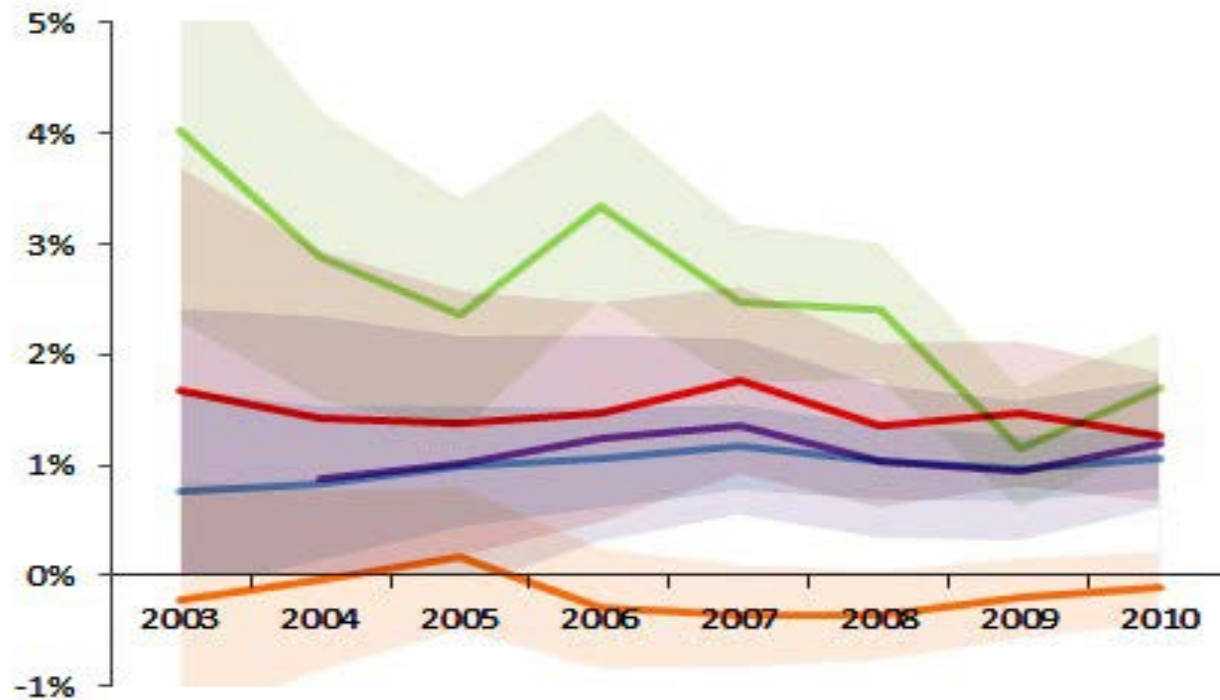
National energy consumption



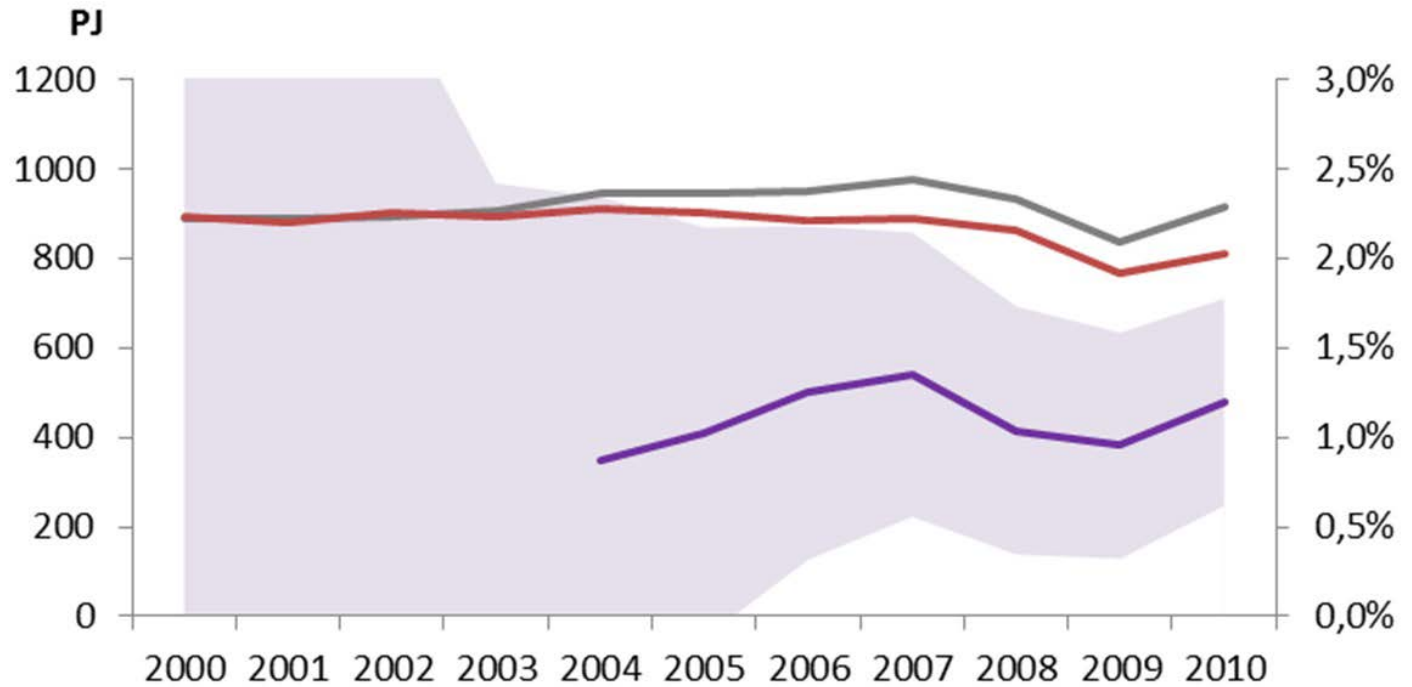
- 95%-betrouwbaarheidsinterval
- Verbruik nationaal als er niet zou zijn bespaard [PJ]
- Werkelijk verbruik nationaal [PJ]
- Besparingstempo nationaal [%]



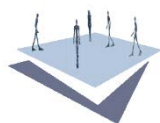
Efficiency improvement sectors



Industry

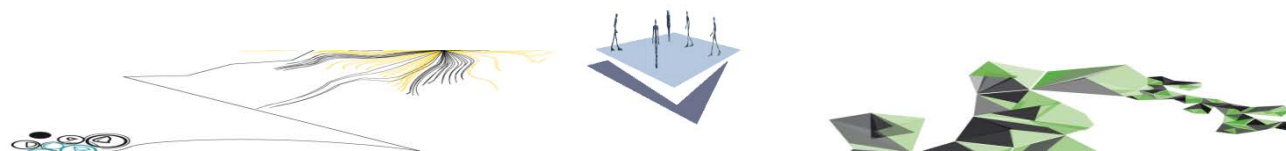


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Green deal: local networks and government

- Deal between green societal initiatives and government
- Society invests in energy efficiency, green energy, green tech
- Government supports, facilitates and modifies rules and policies in favor of green innovation as much as possible
- No public subsidies/funding involved

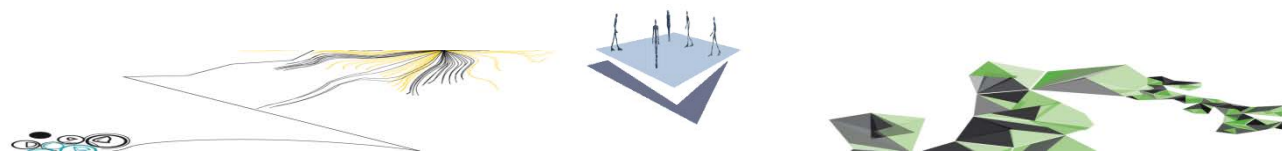


National Energy Agreement September 2013

- An average energy efficiency saving of 1.5% per year (adding up to a reduction of 100 PJ by 2020).
- 14% share of renewable energy in the Netherlands' total consumption of energy by 2020.
- And 16% by 2023 (4.5% in 2013).
- Creating at least 15.000 additional jobs by 2020, of which a significant number to be created in the next years.

- National agreement
47 organisations
Representing:
- Governmental layers
- Industry
- Employer/labor unions
- Environmental NGO's
- Financial organisations

In addition, signatories have committed themselves to several other, long-term actions.



National Energy Agreement September 2013



1 Energy saving in the built environment



2 Energy saving in industry and agriculture



3 Scaling-up renewable energy production



4 Decentralised renewable energy generation



5 Centralised energy transportation networks



6 European Emission Trading System



7 Coal power plants and CCS



8 Transport sector



9 Employment and training



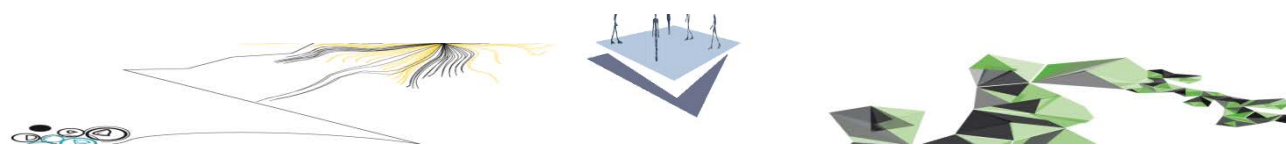
10 Commercialisation of new technologies for economic growth and export



11 Financing investments



12 Heat



Monitoring

Principles for monitoring:

- Signatories to the Agreement are responsible for implementing the described actions, particularly for those actions assigned to them.
- Signatories to the Agreement have a common obligation to successfully implement the Agreement.

Tasks of the Committee

The Standing Committee to the Agreement on Energy for Sustainable Growth:

- monitors the progress of the Agreement;
- directs activities when delays become apparent;
- keeps under review the need for amending (parts of) the Agreement in order to meet its objectives;
- develops an agenda that goes beyond the Agreement's validity.



Conclusion

- Matured Institutional framework
 - Some parts more productive than others
- Governance model: Selfgovernance/Co-production
 - Risk: “Occupying” innovation and change
 - Example: 10 years of energy transition management
 - Monitoring impacts
 - Pro: Acceptance, support, awareness raising, shared responsibility,tit-for-tat
- Difficult to identify the impact in cocktail of policy instruments and authonomous efficiency improvement



Thanks for your attention

