



ENERGY EFFICIENCY POLICIES – EXCHANGING LESSONS LEARNT

“Climate Policies in International Comparison – Spring Campus FU Berlin?”,
Berlin, 11-13 March 2016

Dr. Sibyl D. Steuwer

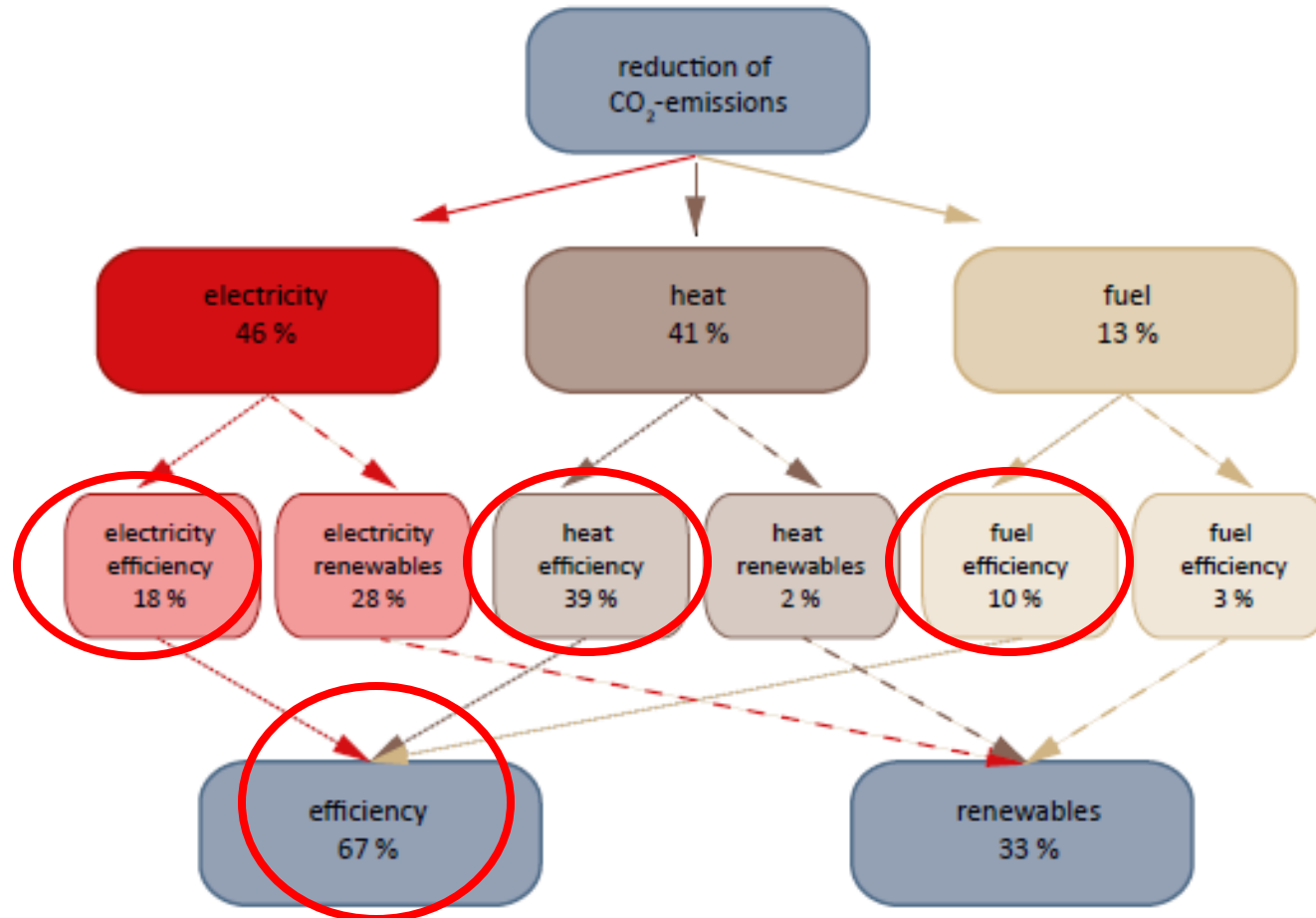
(Sibyl.Steuwer@fu-berlin.de)

THE ENERGY TRANSITION ROADMAP: ENERGY EFFICIENCY TARGETS

	Primary energy	power	Energy productivity	Transport	buildings
2020	-20%	-10%	increase to	-10%	Double Refurbishment p.a.
2030			2,1%/a		
2040					
2050	-50%	-25%		-40%	



Areas of Action for reducing energy-related CO₂-emissions



Source: Expert commission on the „Energy for the Future“ monitoring process; statement on the second monitoring report by the German Government for 2012, March 2014





ENERGY EFFICIENCY FOR ENERGY TRANSITION

- Reduction of necessary installed capacity
- Provision of flexibility
- Innovation
- Get new and more actors engaged

GERMANY'S ENERGY EFFICIENCY PERFORMANCE

Level of
Energy
Efficiency
Performance:
Rank 4
(final energy
intensity)

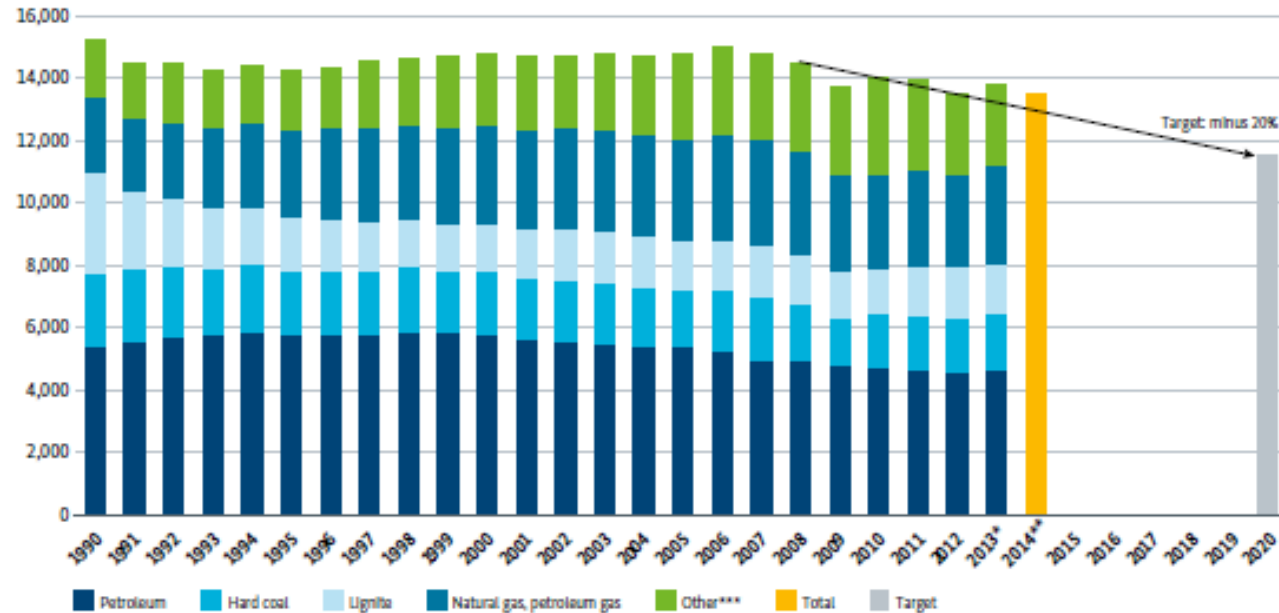


Annual
Energy
Efficiency
Gains
(measured
2000-2012):
Rank 18
(ODEX)

Source: Fraunhofer ISI, deneff, PM 20. April 2014



Figure 2: Development of primary energy consumption by energy source
Adjusted figures in petajoules (PJ)



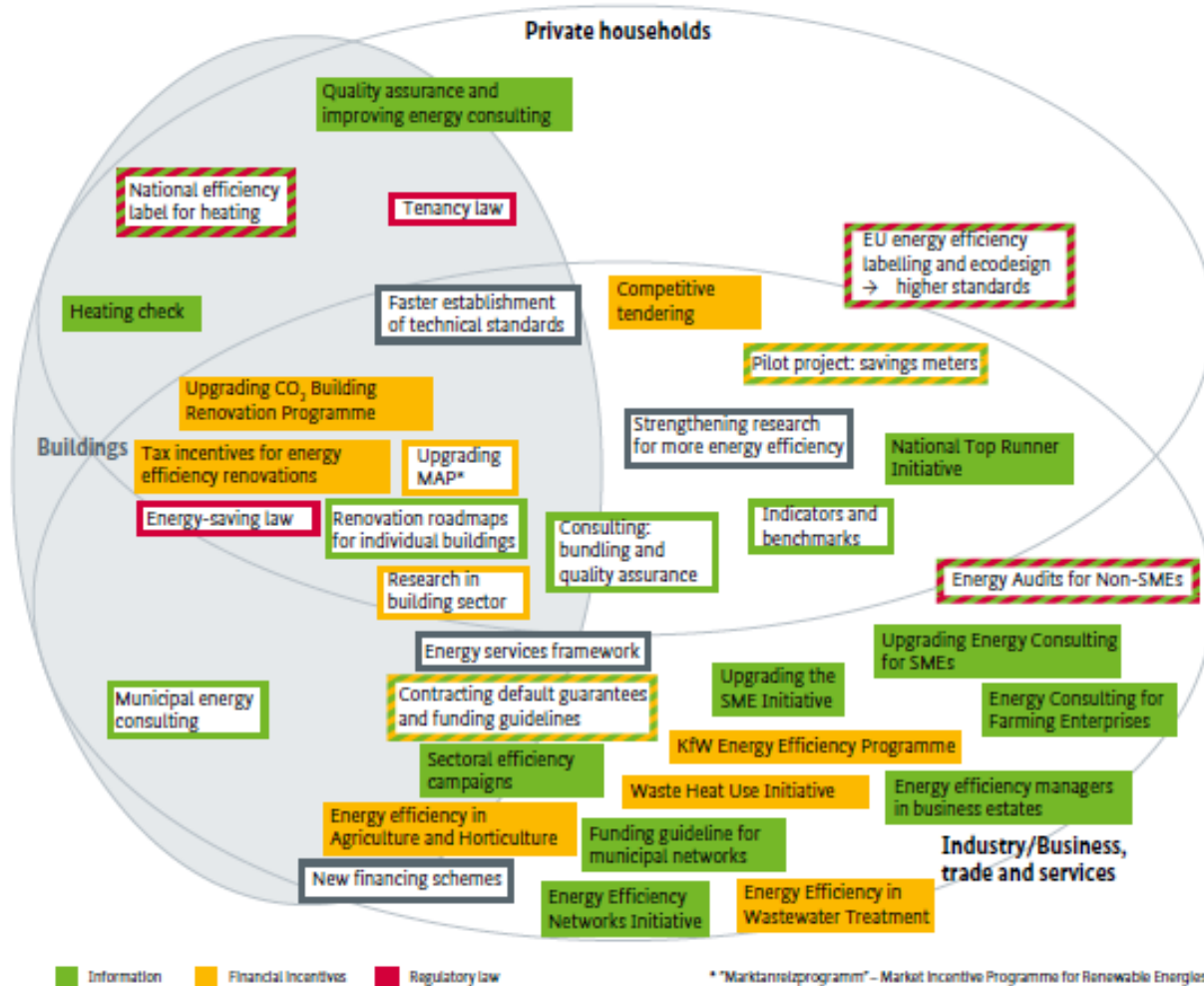
* Provisional **First estimate ***Renewable, nuclear energy, other

Source: AG Energiebilanzen.

Source: BMWi, NAPE: <http://www.bmwi.de/English/Redaktion/Pdf/nape-national-action-plan-on-energy-efficiency,property=pdf,bereich=bmwi2012,sprache=en,rwb=true.pdf>



Figure 1: Short-term measures and long-term work processes of NAPE for the 18th legislative term



Source: Federal Ministry for Economic Affairs and Energy

Source: BMWi, NAPE: <http://www.bmw.de/English/Redaktion/Pdf/nape-national-action-plan-on-energy-efficiency.property=pdf,bereich=bmw2012,sprache=en,rwb=true.pdf>

WHAT IS REGARDED AS „INNOVATIVE POLICY-MAKING FOR ENERGY EFFICIENCY“?

- Top-Runner
- KfW-Support Schemes
- On-bill financing (e.g. Green Deal in the UK)
- White Certificates Schemes
- Feed-in Tariffs for Renewables
- Business networks for energy efficiency
- Auction Schemes

WHAT IS REGARDED AS „INNOVATIVE POLICY-MAKING FOR ENERGY EFFICIENCY“?

- Top-Runner
 - KfW-Support Schemes
-
- On-bill financing (e.g. Green Deal in the UK)
 - White Certificates Schemes
 - Feed-in Tariffs for Renewables
 - Business networks for energy efficiency
 - Auction Schemes

WHAT IS REGARDED AS „INNOVATIVE POLICY-MAKING FOR ENERGY EFFICIENCY“?

- Top-Runner
- KfW-Support Schemes
- On-bill financing (e.g. Green Deal in the UK)
- White Certificates Schemes
- Feed-in Tariffs for Renewables
- Business networks for energy efficiency
- Auction Schemes

WHAT IS REGARDED AS „INNOVATIVE POLICY-MAKING FOR ENERGY EFFICIENCY“?

- Top-Runner
 - KfW-Support Schemes
 - On-bill financing (e.g. Green Deal in the UK)
 - White Certificates Schemes
 - Feed-in Tariffs for Renewables
- Business networks for energy efficiency
 - Auction Schemes



So – WHAT IS THE PROBLEM?

- Broad knowledge base, many studies & solutions
- Most of the Studies have a engineering, economist, behavioral economics or psychology perspective
- Political scientist mainly work on impact studies – very little „politics“

But...

Transformations require system shifts – this is highly political

WINDOW OF OPPORTUNITY WITH THE RISE OF A „NEW“ INSTRUMENT? – TENDERING SCHEMES

- Experiences in the United States, Portugal, Switzerland
 - Differences in focus: private household energy efficiency improvements; industrial uses and processes: load management, bidding for capacity
- Germany: first auctioning experiences with renewables
 - Pilot scheme for electricity efficiency starting in spring (?) 2016
 - Winning bid: most savings for Euro invested
 - Max. 10€cent/kWh, payback >3 years; subsidy < 30%
 - 2 bidding rounds per year in pilot phase

 Is this a window of opportunity for transformation in energy efficiency?

AUCTION SCHEMES FOR ENERGY TRANSITION?

	Tender Schemes in Theory
<p>Function for energy transition?</p> <ul style="list-style-type: none">• Reduction of necessary installed capacity• Provision of flexibility• Innovation• ...	<ul style="list-style-type: none">• Tendering for Capacity• Catalogue of eligible measures (projects? programmes? Sector-specific?)• Depending on eligible projects and award criteria
<p>Actors</p> <ul style="list-style-type: none">• Incentive to deliver savings• New actor constellations• Activation of actors along value chain	<ul style="list-style-type: none">• Obligated actor: successful bidder• Depends on design• Advantages for bigger actors?

AUCTION SCHEMES FOR ENERGY TRANSITION?

	Tender Schemes in Theory	Envisaged design choices in Germany
Function for energy transition? <ul style="list-style-type: none">• Reduction of necessary installed capacity• Provision of flexibility• Innovation• ...	<ul style="list-style-type: none">• Tendering for Capacity• Catalogue of eligible measures (projects? programmes? Sector-specific?)• Depending on eligible projects and award criteria	<ul style="list-style-type: none">• Open and closed tender• Starting with electricity savings; learn and maybe expand to electricity AND heat• Innovative potential??
Actors <ul style="list-style-type: none">• Incentive to deliver savings• New actor constellations• Activation of actors along value chain	<ul style="list-style-type: none">• Obligated actor: successful bidder• Depends on design• Advantages for bigger actors?	<ul style="list-style-type: none">• Open to contracting companies• Project pooling (private persons and enterprises)• Single projects within enterprises

WHAT IS RELEVANT RESEARCH ON ENERGY EFFICIENCY POLICY AND POLITICS TODAY?

- How to overcome the implicit incumbency of energy efficiency?
- What is the level of learning:
 - best practice policies,
 - best practice technologies,
 - best sectoral approaches,
 - best practices of systemic solutions at e.g. regional or the city level?
- Or, are there opportunities for strategic learning – how to politicise energy efficiency? How to overcome the toolbox logic of instrument choice?



THE END

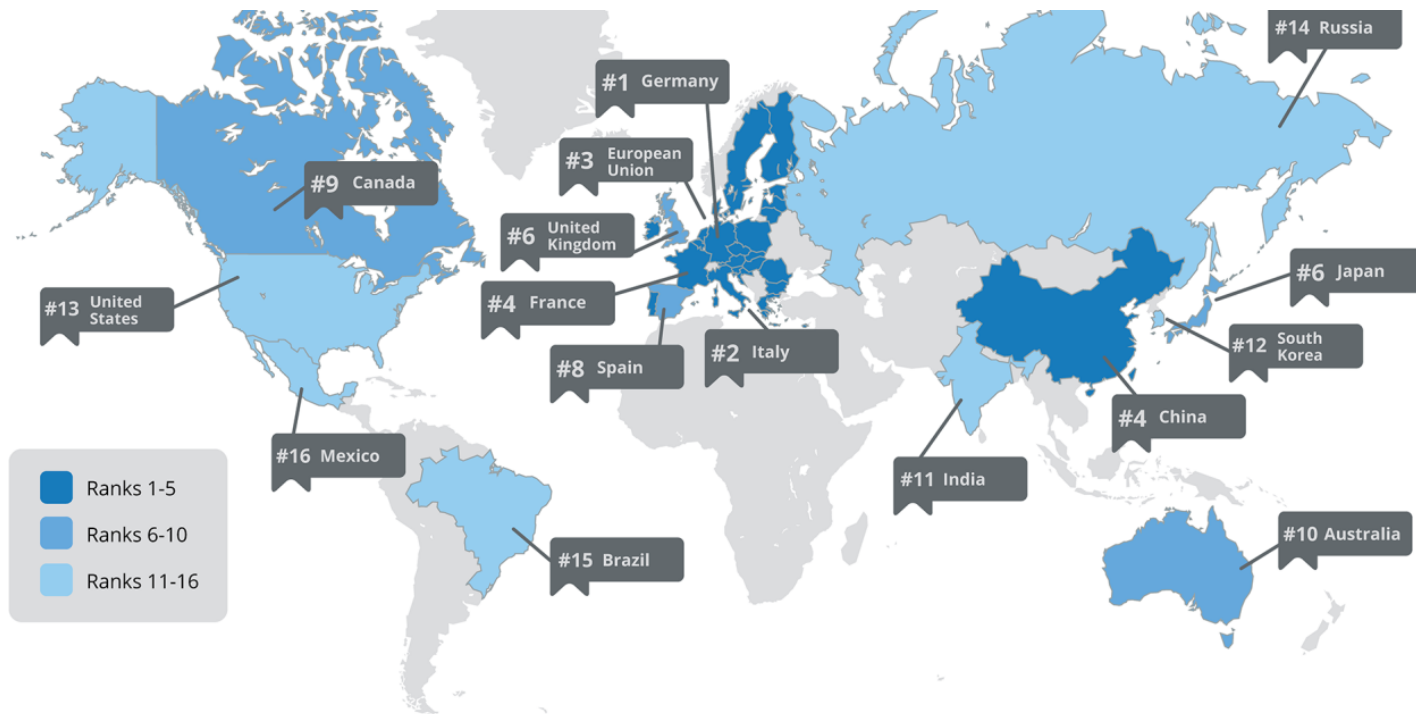
SOME THESIS FOR DISCUSSION

- What is the best Unit for Systemic Thinking in Energy Efficiency Policies – sectoral approaches (transport, buildings, electricity consumptions in private households, industry appliances), or, regions (integrate efficiency into virtual power plants), cities (focus on urban infrastructures)?
- How to deal with flexibility requirements? What are other countries' experience? Is there a policy instrument answer to this question?
- Energy Efficiency: implicit system of incumbency
- How to overcome a toolbox logic (ACHTUNG: TABELLE AUFDRÖSELN UND ACTEURS DIVERSITÄT SO BEGRÜNDEN=
- Are we talking about the right kind of efficiency solution/innovation?

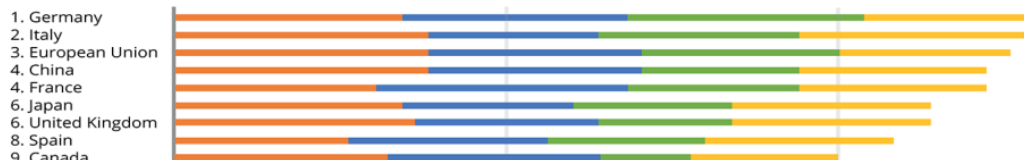
PLATTFORM ENERGIEEFFIZIENZ

AG „Wettbewerbliche Ausschreibungen“

Die AG "Wettbewerbliches Ausschreibungsmodell" wird die Einführung dieses neuen Instruments in der Pilotphase im Bereich Stromeffizienz begleiten. Die AG hat ihre Arbeit am 10. März 2015 aufgenommen. Zunächst wurden seitens BMWi die Rahmendaten und die zentralen Prinzipien des Programms STEP up! vorgestellt. Die Pilotphase soll bis 2018 gehen. Ein jährliches Anwachsen der ausgeschriebenen Fördersummen ist vorgesehen.



Overall country scores with sector breakdown



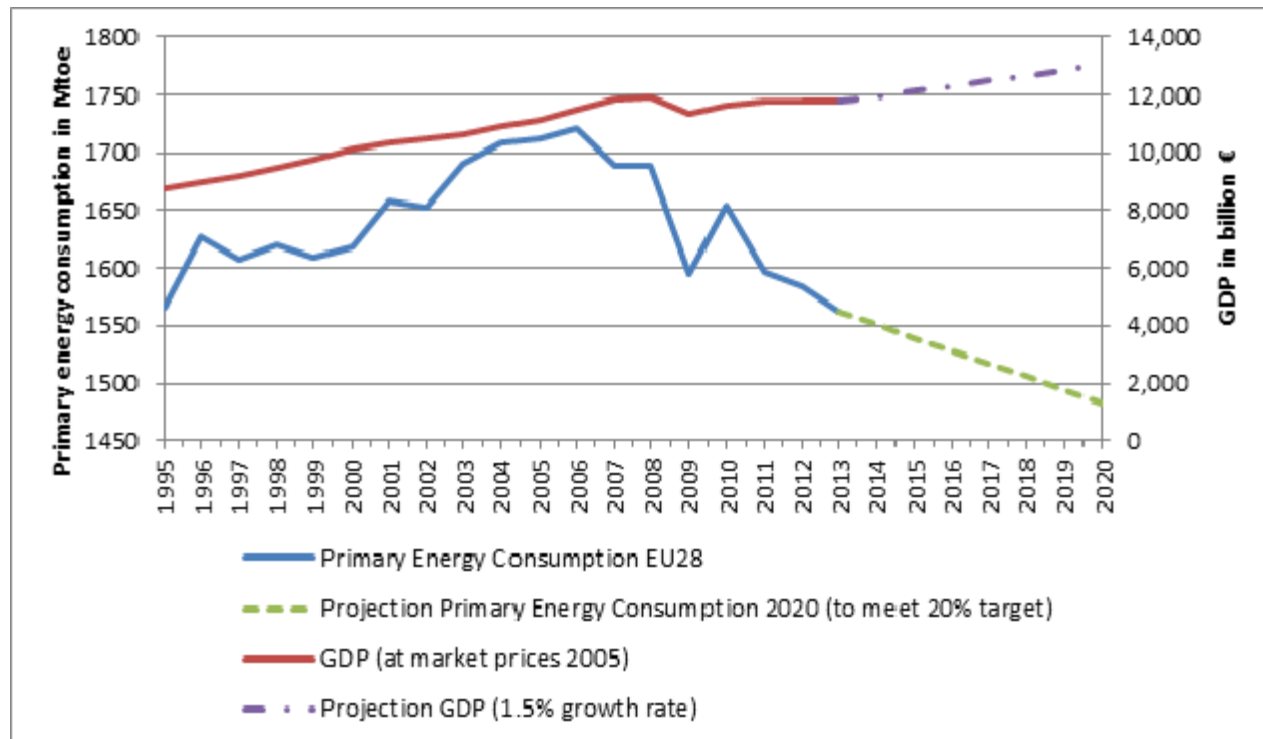
Every country has untapped energy

Source: ACEEE2014, <http://aceee.org/files/pdf/summary/e1402-summary.pdf>





Decoupling Growth from Energy Use



Source: EU COM 2014 Energy Efficiency Communication:
https://ec.europa.eu/energy/sites/ener/files/documents/2014_energy_efficiency_communication.pdf

WINDOW OF OPPORTUNITY – UPDATE OF EU ENERGY EFFICIENCY DIRECTIVE UNDERWAY

Consultation shows

- Overall agreement that EU EED is a comprehensive energy efficiency policy framework
- Majority (68%) of consultation participants find Art. 7 on Energy Efficiency Obligations an effective instruments to reach the targets; aim at continuing beyond 2020
- however, also doubts that the level of ambition will be sufficient to keep Paris promises
- little evidence for innovative, or, additional ideas to be implemented

AUCTION SCHEMES FOR ENERGY TRANSITION?

Function for energy transition?

- Reduction of necessary installed capacity
- Provision of flexibility
- Innovation
- ...

Actors

- Incentive to deliver savings
- New actor constellations
- Activation of actors along value chain