

# Status and Challenges of the Implementation of the RES Directive

Nordic-Baltic conference "Policy Challenges on  
Energy Efficiency and Renewable Energy"

18-19 October 2012, Tallinn, Estonia  
Deputy Director General Petteri Kuuva



# Agenda

- National Renewable energy Action Plan (NREAP)
- Economic steering tools for RES
- Are we reaching the target?



# Agenda

- National Renewable energy Action Plan (NREAP)
- Economic steering tools for RES
- Are we reaching the target?



# NREAP 2010:

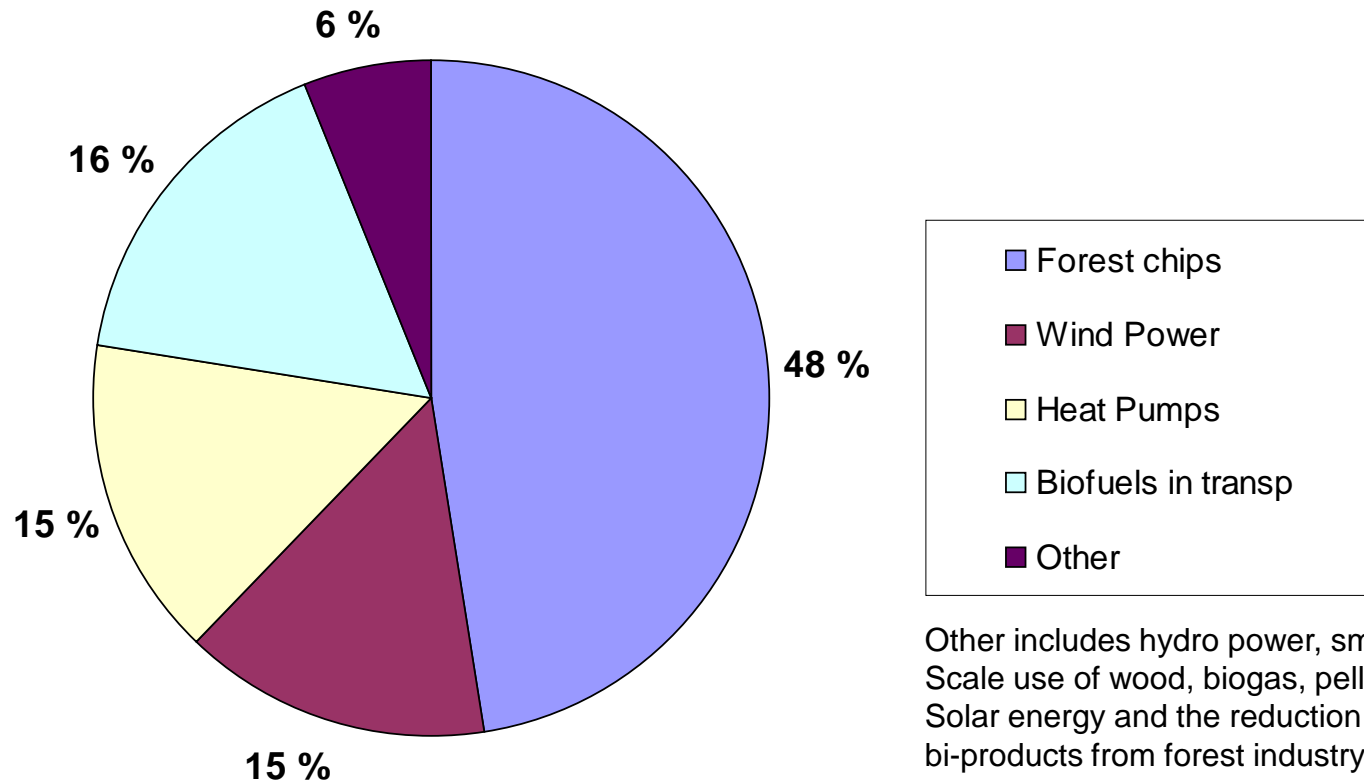
## The need to increase the use of RES 38 TWh

- According to the scenario final consumption of energy in 2020 would be 327 TWh
- The 38 % of RES equals to 124 TWh
- In 2005 the use of RES in final consumption was 87 TWh
- Needed increase of RES 2005 → 2020 is about **38 TWh**



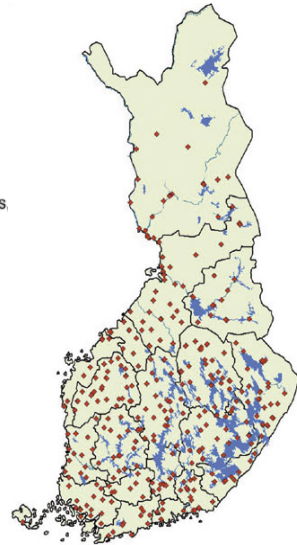
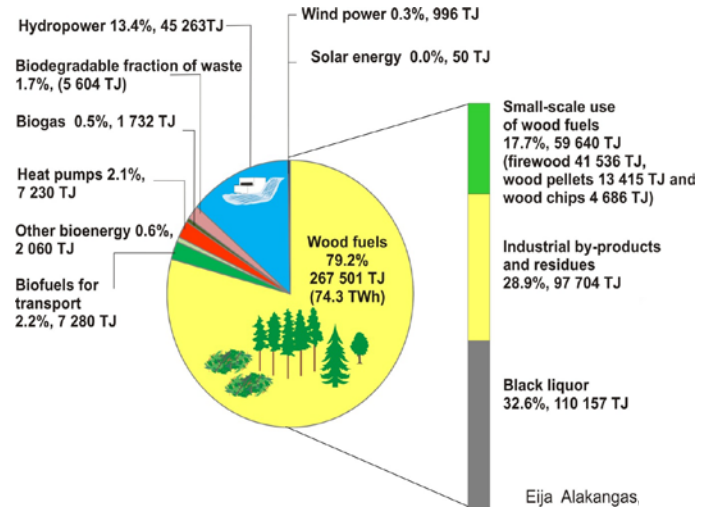
# Shares in the increase of RES in primary energy in 2005-2020 , %

Increased use of RES in primary energy 39.2 TWh  
and in final consumption 37.5 TWh



# Bioenergy in Finland

- **Over 400** medium and large scale **biopower and heating plants** (mainly **CHP-plants**)
- Finland is one of the world leaders in the utilisation of **wood-based fuels**
  - Almost 80 % of RES is wood-based bioenergy
  - About 65 % of RES is based on residuals from forest industry
- The increase of the use of forest chips in power and heat production (multifuel boilers) requires usually very little investments (fuel switch from peat to forest chips)



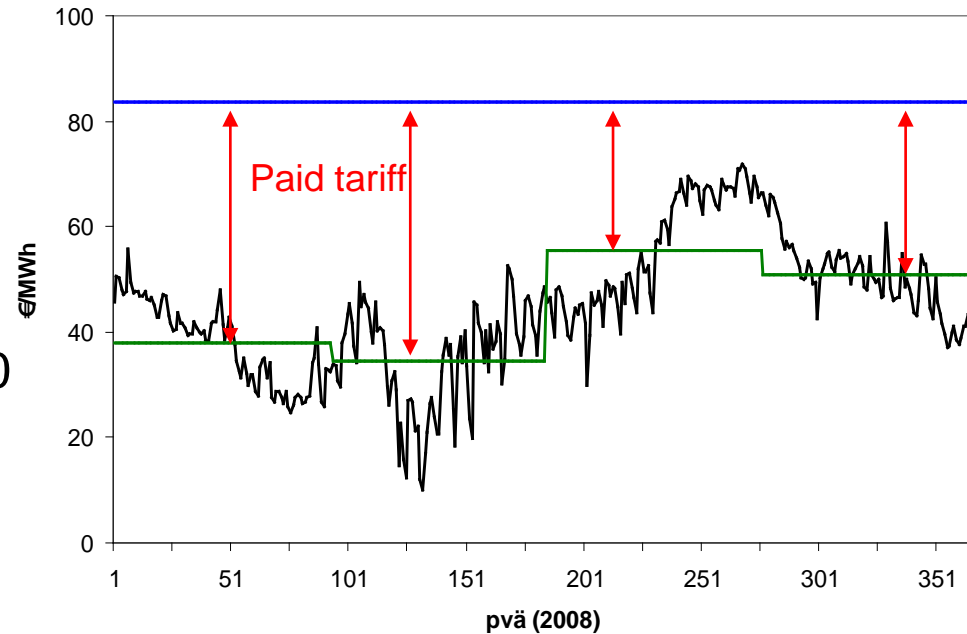
# Agenda

- National Renewable energy Action Plan (NREAP)
- Economic steering tools for RES
- Are we reaching the target?



# Sliding premium feed-in tariff for wind power

- The production of wind power is increased to 6 TWh by 2020
- Wind power production now only 0,3 TWh
- Feed-in subsidy = target price – electricity spot market price
- Target price for wind power 83.50 €/MWh
- "Early bird" –bonus until the end of 2015: target price 105.30 €/MWh for max three years
- The total cost of the subsidy system in 2020 is 200 million €, if market price is 50 €/MWh



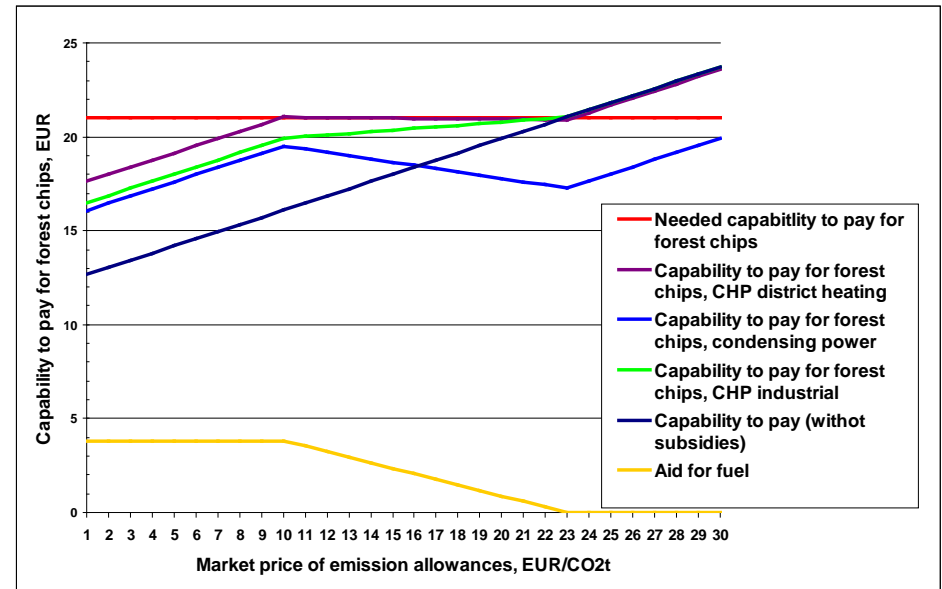
- The aid system took effect on 25 March 2011 after the European Commission had approved the state aid notification.





# Production subsidy dependent on EU-ETS allowance price for electricity from forests chips

- The share of wood fuel is increased in multi-fuel boilers using wood and peat.
  - Production subsidy dependent on EU-ETS allowance price as follows: 18 €/MWh if CO<sub>2</sub> price max. 10 €/t, the subsidy decreased linearly to 0 €/MWh when CO<sub>2</sub> price is 23 €/t.
  - Capability to pay for forest chips is set to 21 €/MWh

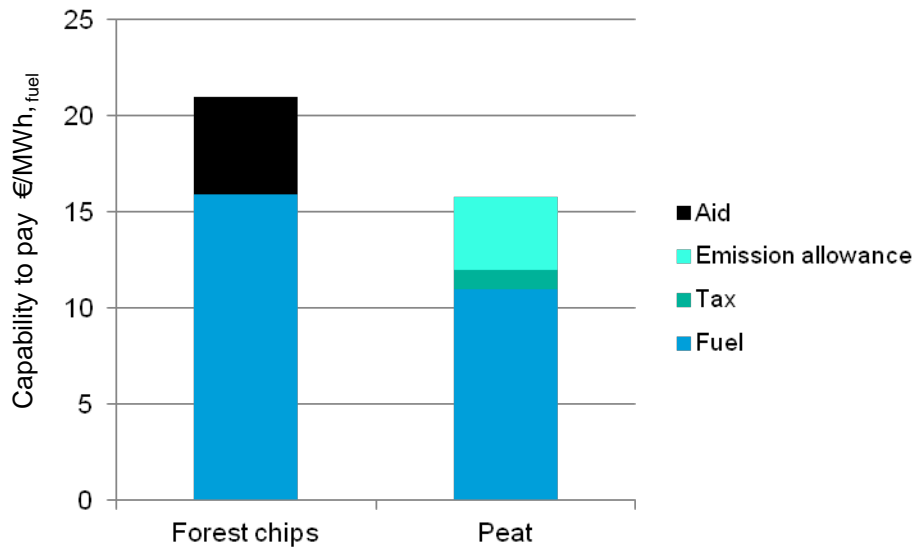


- The aid system took effect on 25 March 2011 after the European Commission had approved the state aid notification.

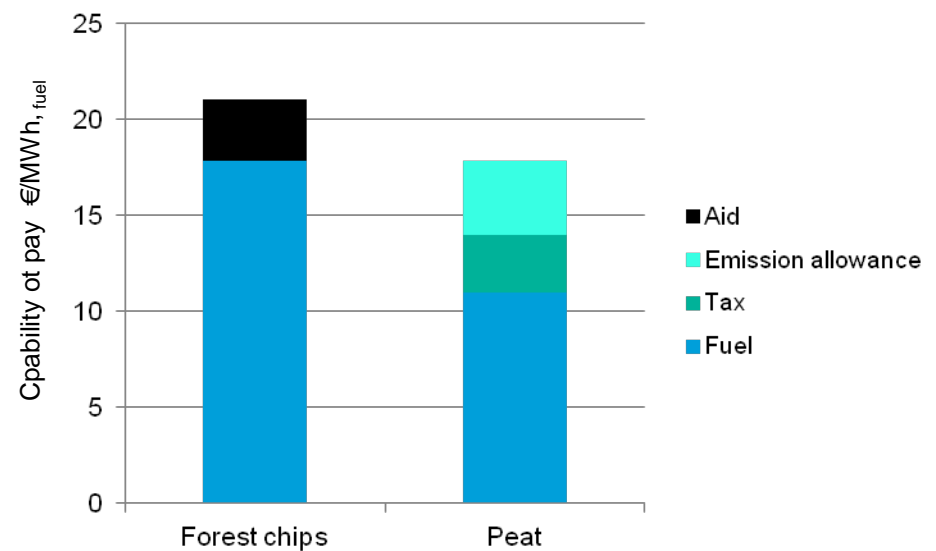


# Peat tax vs. aid for power from forest chips

Effect of the aid to the capability to pay for forest chips, when peat tax is 1,9 €/MWh



Effect of the aid to the capability to pay for forest chips, when peat tax is 4,9 €/MWh

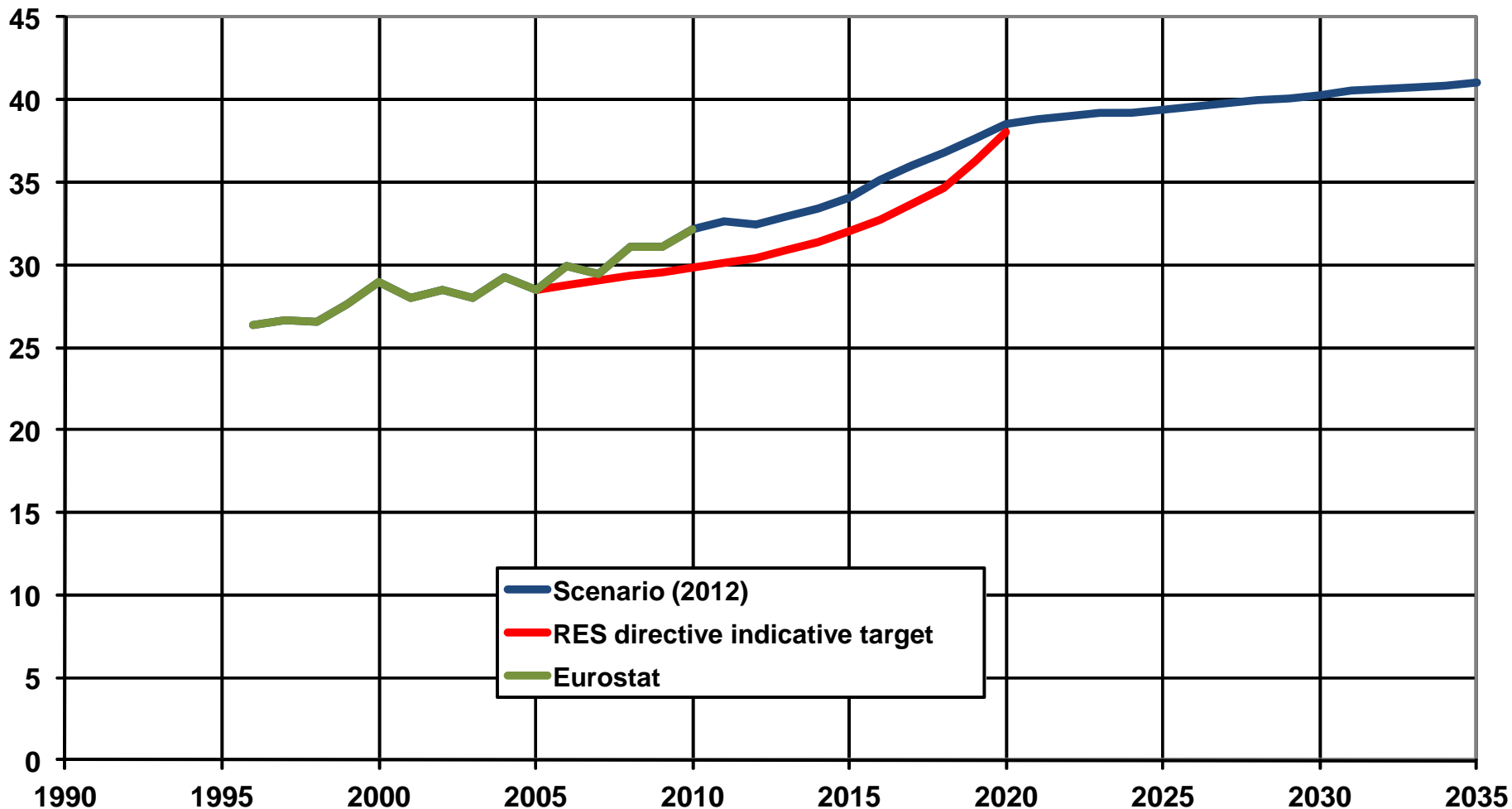


# Agenda

- National Renewable energy Action Plan (NREAP)
- Economic steering tools for RES
- Are we reaching the target?



# Share of renewable energy sources from final energy consumption, %

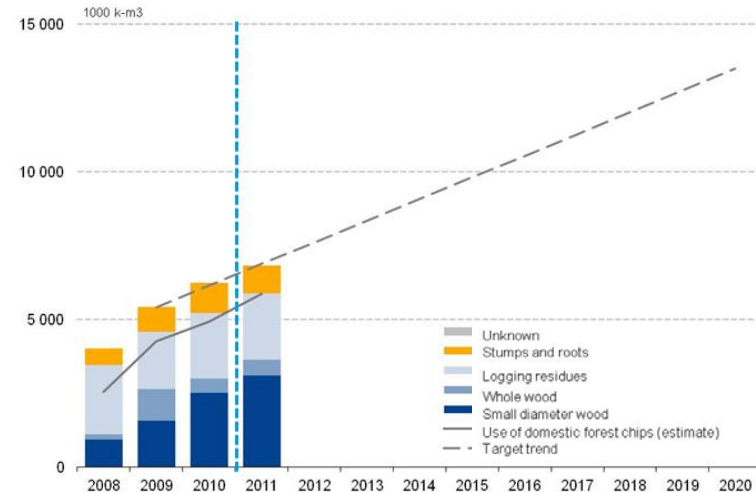
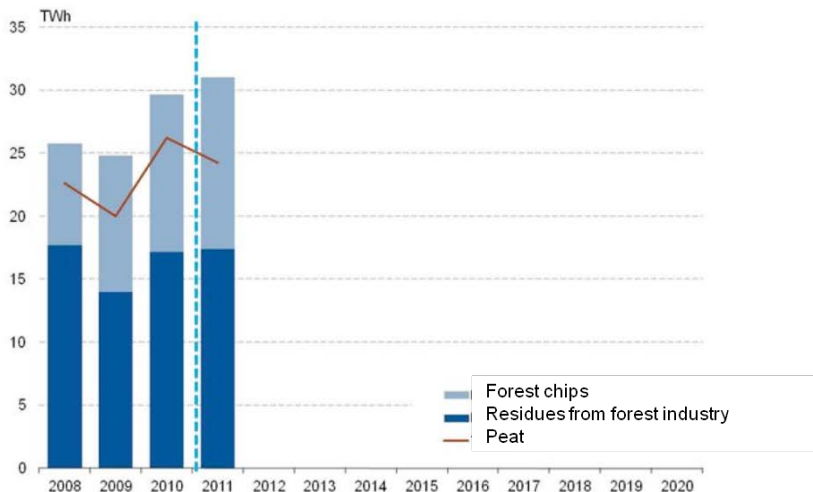


# The use of forest chips has increased as expected

- Forest chips have replaced peat and the use of forest chips is increasing according to the target trend
- Annual generation in the aid system 3 TWh
- Aid level 18 €/MWh, e equals 6 €/MWh, res

Situation of the aid system, September 2012

	Prenotified plants	Application under preparation	Approved plants
Number of plants		1	48
Generation capacity in the aid system, MVA		5	3401
Annual generation, GWh		4	2998



# Non-economic barriers for wind power

- Wind power projects 7800 MW of which 3000 MW off-shore
- Aid level for on-shore projects is sufficient, additional demonstration aid for an off-shore plant
- Wind power target can be reached if non-economic barriers are abolished
- Proposals of the one-man committee (Mr. Lauri Tarasti) is under implementation
- Aid level Q1-12: 62,6 €/MWh,e (spot-price 42,7 €/MWh)
- Aid level Q2-12: 72,9 €/MWh,e (spot-price 32,4 €/MWh)

Situation of the aid system, September 2012

	Prenotified plants	Application under preparation	Approved plants
Number of plants	11	4	11
Generation capacity in the aid system, MVA	165	69	105
Annual generation, GWh		182	299

