



Eesti Taastuvenergia Koda

# Renewable Energy in Estonia

Rene Tammist, Estonian Renewable Energy Association

13.9.2103

# EREA's introduction

- Established in May 13 2011
- 14 members incl 5 associations



Eesti Taastuvenergia Koda



Estonian Biogas Association



Estonian Solar Energy Association

## EREA's introduction

---



Eesti Taastuvenergia Koda

**Stable,  
predictable and  
sustainable  
regulatory  
environment**

**Spreading  
information  
about RES  
solutions,  
informing  
about the  
potentials and  
effects**

**Taking part  
from the  
debates  
concerning the  
energy policy**

**R&D&I**

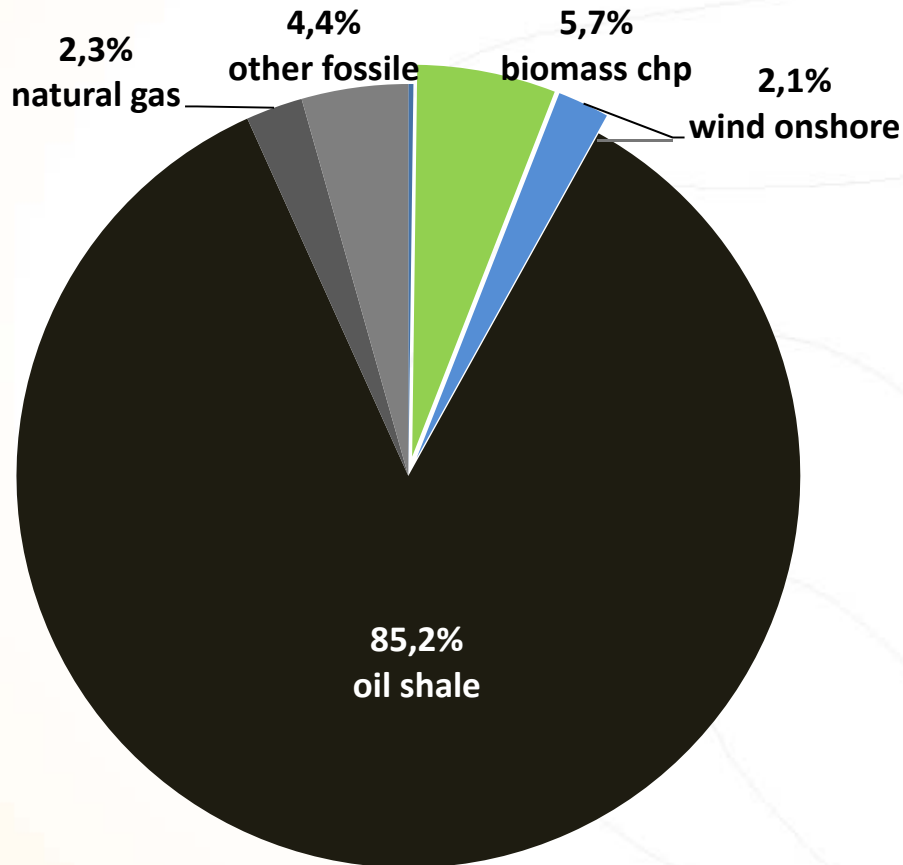
**100%  
renewables by  
.... ?**

# Electricity and heat production in Estonia, 2010

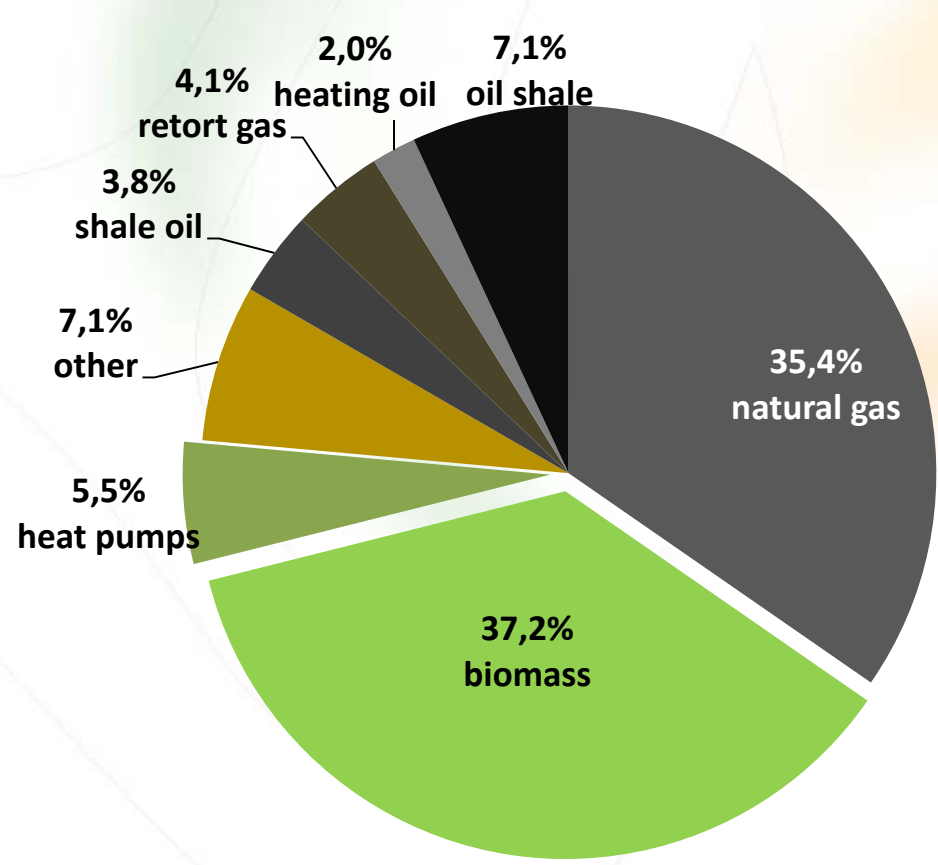


Eesti Taastuvenergia Koda

## Electricity production



## H&C production

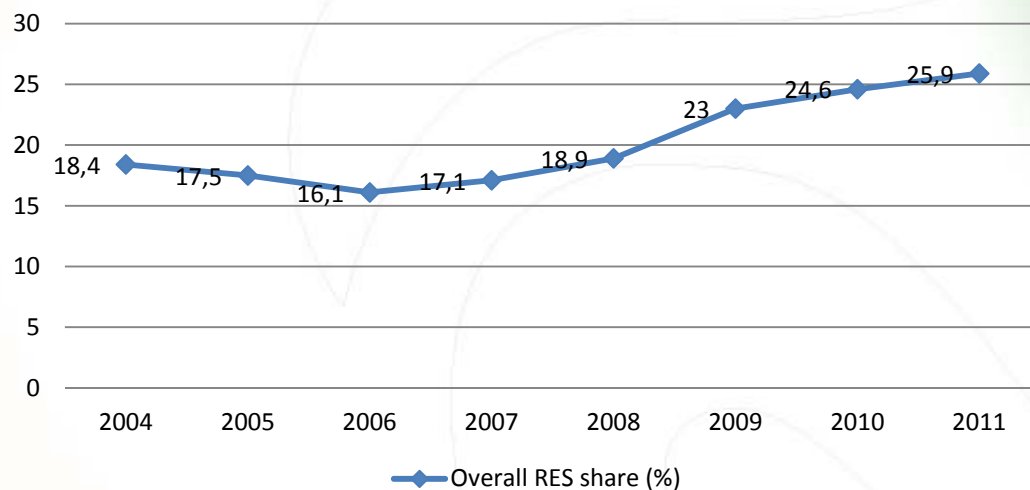


# State of Play of RES in Estonia



Eesti Taastuvenergia Koda

Overall RES share in final energy consumption , % 2004-2011



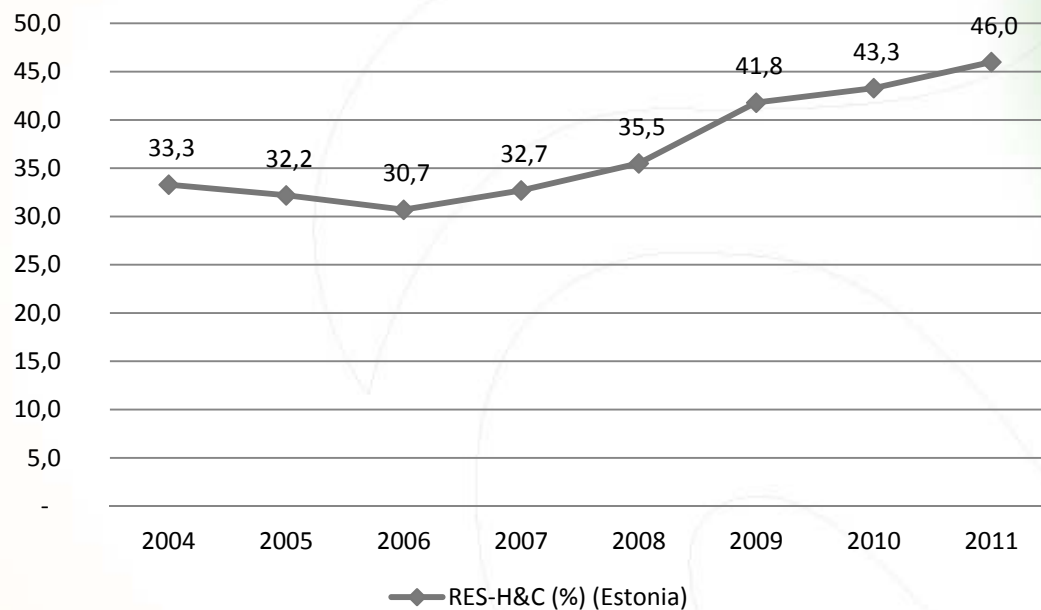
- q Estonia first country to fulfil its 2020 RES directive target (25%)
- q Biggest growth in RES-H&C sector, 2020 NREAP sectoral target was already exceeded in 2009
- q RES-E growth above the trajectory, from 2% in 2008 to 12,3% in 2011
- q RES-T still non-existent

## State of Play of RES-H&C in Estonia



Eesti Taastuvenergia Koda

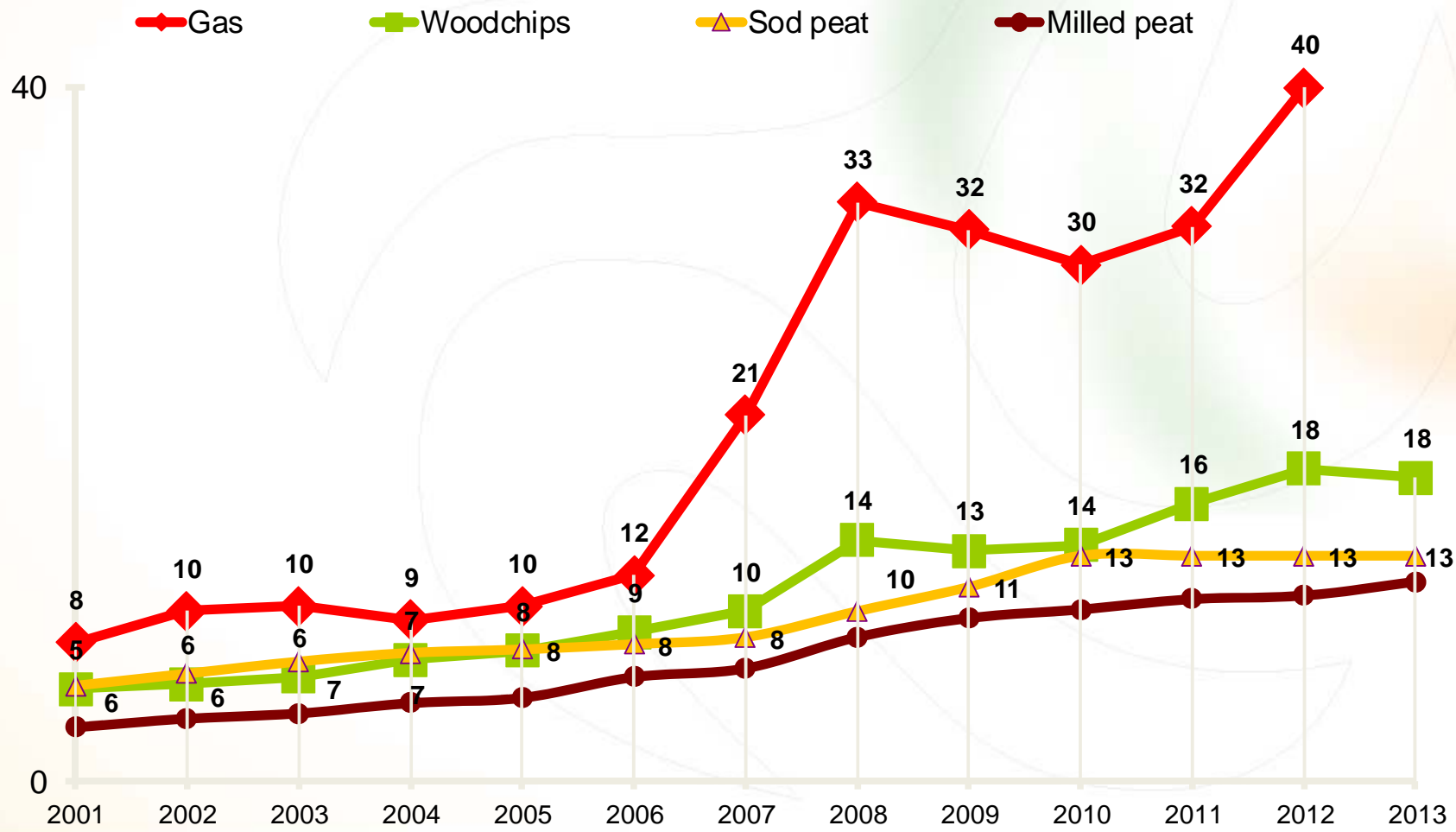
RES-H&C in Estonia, % 2004-2011



- q RES-H&C potential often underestimated
- q Growth due to combination of various reasons: fuel prices, targeted support measures
- q Good potential for further increase



## EVOLVEMENT OF FUEL PRICES IN ESTONIA 2001-2013 (€/MWh)

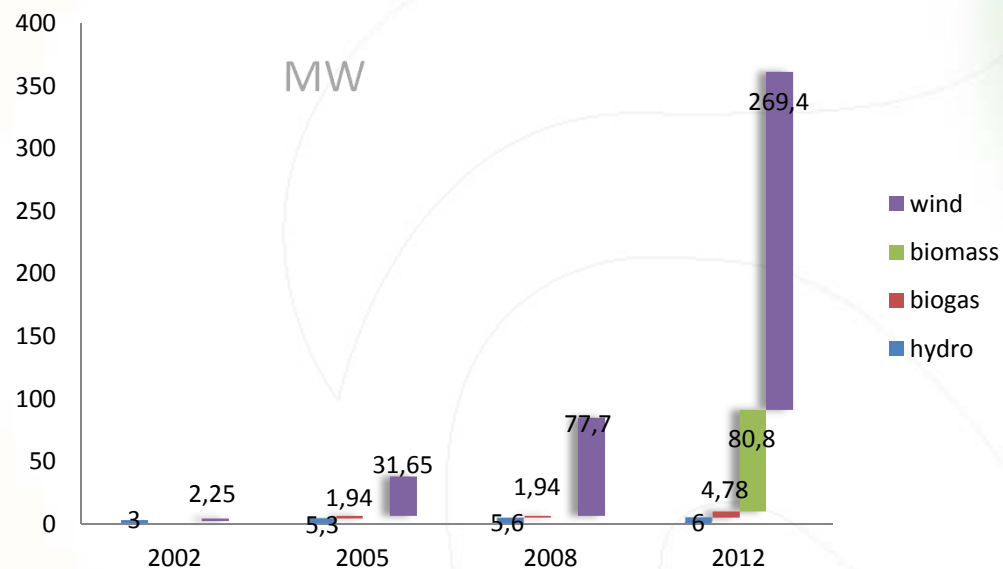


# State of Play of RES-E in Estonia



Eesti Taastuvenergia Koda

## Evolution of RES-E Capacity in Estonia



- q 363,4 MW RES-E capacities at the end of 2012
- q Until 2007 investments were non-existent, RES-E share in final energy consumption only 1,5%
- q In 2007 new FiP scheme was put in place
- q Fastest growth in 2009 with 107,5 MW of added capacity
- q In 2011 12,3% of electricity was produced from RES



# Estonia's NREAP 2020



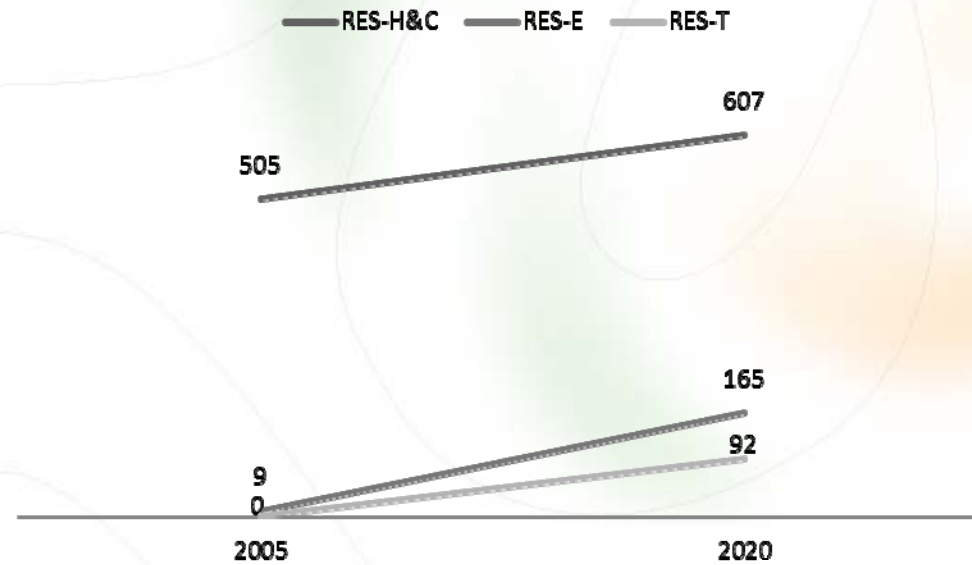
Eesti Taastuvenergia Koda

q RES directive sets Estonia's target at the level of 25% (18% in 2005)

q NREAP sectoral targets:

- ✓ RES-HC from 2005 31,3% to 38,4% in 2020,
- ✓ RES-E from 0,1% to 17,6%,
- ✓ RES-T from 0% to 10%

Estonia's NREAP 2005-2020, ktoe



# Overview of major RES policy changes in Estonia 2007-2013



Eesti Taastuvenergia Koda

- RT I 2007, 66, 408
  - Move to feed-in premium based system. Renewable energy producers receive 53,7 Euro/MWh on top of electricity market price. Under the Electricity Market Act §591, for wind energy producers capacity triggered reduction on support is set at 400 GWh of electricity produced annually.
  - Efficient CHP (from fossil fuels - waste, peat, natural gas and retort gas from oil shale) receive 32 Euro/MWh on top of market price
  - Quick take up of renewables
- RT I 2010, 8, 40
  - Wind energy producers capacity triggered reduction (CAR) in support is increased to 600 GWh annually.
- RT I, 28.06.2012, 1
  - **retroactive reduction in support!**
  - the amendment to the Electricity Market Act excludes the consumption of electricity and heat by the energy branch for electricity and heat production from the support mechanisms. Renewable CHP producers incur losses on average of 10% from the previous support levels.
- draft 318 SE
  - **retroactive reduction in support!**
  - abolishment of remuneration option for RES-E power generation based on market price + feed-in premium, applicable to both existing and future projects above 10 MW and for all wind energy projects
  - change of the mechanism of indexation of the RES-E remuneration to the electricity prices. Producers using Renewable energy producers with a capacity above 10 MWe and all wind energy producers – FiT 93 €/MWh. Producers using natural gas (up to 10 MWe), retort gas, peat and municipal waste in efficient CHP regime with a capacity above 10 MWe – FiT 72 €/MWh
  - Annual capacity triggered reduction in support for all renewable energy producers, in essence moratorium for new capacity.

## Other existing and future support schemes



Eesti Taastuvenergia Koda

| Incentives  |  |      |           |
|---|--|------|-----------|
| Measure   | Conditions   | 2013 | 2014-2020 |
| Bioenergy support programme                             | <ul style="list-style-type: none"> <li>- 30-50% of applicable cost, up to 512 000 EUR</li> <li>- Biomass based RES-E, H&amp;C, T</li> <li>- <a href="http://www.pria.ee">http://www.pria.ee</a></li> </ul> | V    |           |
| Rural communities programme                             | <ul style="list-style-type: none"> <li>- 33,3% of applicable cost, up to 6500 EUR</li> <li>- Micro RES systems</li> <li>- <a href="http://www.eas.ee">www.eas.ee</a></li> </ul>                            | V    |           |
| Production of alternative fuels (mainly biomethane)     | <ul style="list-style-type: none"> <li>- 51,9 Million EUR,</li> <li>- concrete conditions to be adopted during next 6 months</li> </ul>  |      | V         |
| Incentive for promoting sales of small-scale renewables | <ul style="list-style-type: none"> <li>- 5 Million EUR,</li> <li>- concrete conditions to be adopted during next 6 months</li> </ul>   |      | V         |
| Investment support for production of bioenergy          | <ul style="list-style-type: none"> <li>- 5 Million EUR,</li> <li>- concrete conditions to be adopted during next 6 months</li> </ul>   |      | V         |

## Conclusion

---



Eesti Taastuvenergia Koda

- i. Estonia has had a very good progress, 1st country in the EU to fulfil its 2020 RES target
- ii. The potential of renewable energy in Estonia is still largely untapped
- iii. Policy framework matters, without the good framework the growth wouldn't had been possible
- iv. Due to the retroactive and other (potential) changes in the regulatory framework the growth has stalled and prospects remain bleak



Eesti Taastuvenergia Koda

# Thank you!

**Estonian Renewable Energy Association**

**Rene Tammist**

**[rene.tammist@taastuvenergeetika.ee](mailto:rene.tammist@taastuvenergeetika.ee)**

**[www.taastuvenergeetika.ee](http://www.taastuvenergeetika.ee)**

**+ 372 56 490670**