

An aerial photograph of a lush green landscape. A winding river flows through a vibrant green field, surrounded by dense forests. In the background, there are several small lakes or ponds. The sky is filled with soft, white clouds.

The Baltic Sea: Baseline for a Green Powerhouse

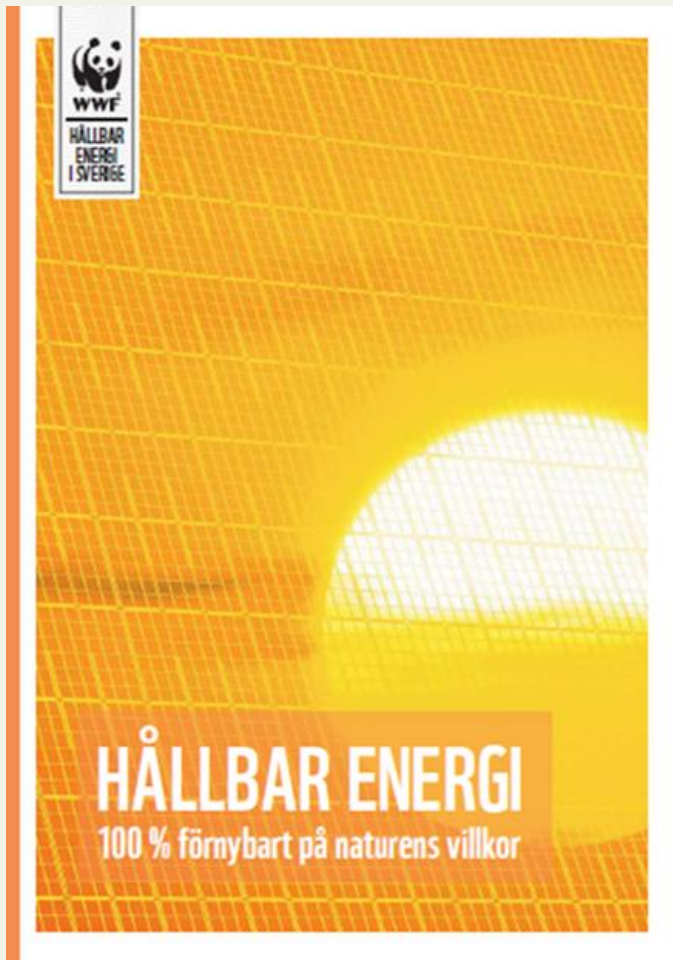
17th Inter-Parliamentary
Meeting on Renewable
Energy and Energy Efficiency

Parliament of Estonia, Tallinn
29 September 2017

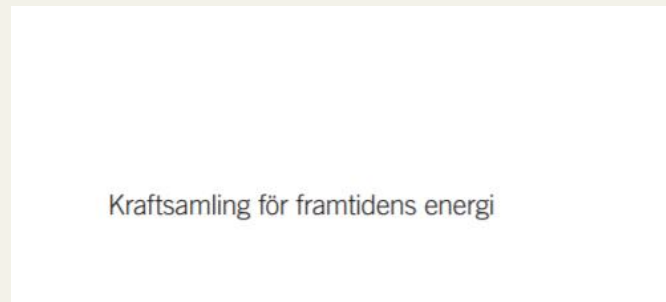
Håkan Wirtén, CEO, WWF
Sweden



Sweden and 100 % RE!



2011



2016



EU and 100 % RE?



2013



2018?



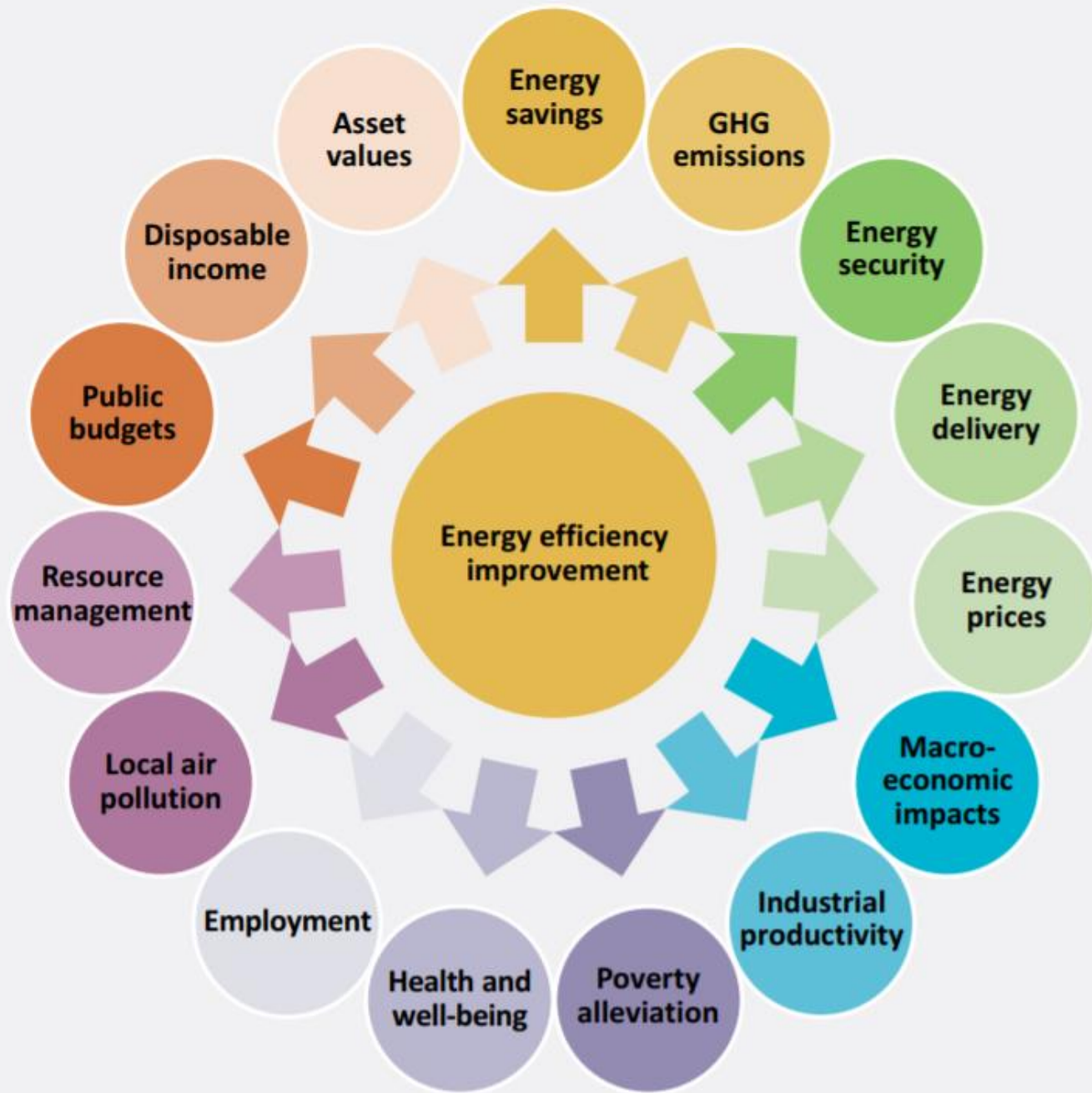
Requirements for a Baltic “Green Powerhouse”

- Regional trust and co-operation
- Energy Efficiency first
- A flexible electricity and energy system
- RE production in a sustainable way
- Innovation and competitiveness



Regional trust and co-operation

- Nordic countries has had a common electricity market for decades – trust, dependence & co-operation
- A common electricity certificate market between Norway and Sweden ends 2020
- Co-operation could increase in the Baltic region to demonstrate potential for EU:
 - Political (common energy market and support schemes),
 - Technical (more transmission capacity)
 - Will lead to 100 % RE faster and more cost-efficient
- Important that all countries increase co-operation in the Energy union





A flexible electricity/energy system

- Energy Efficiency first
- Increased transmission capacity/grid reinforcement
- Digitalisation/Smart grids
- Demand response/user flexibility
- Storage
- Power-to-gas, power-to-heat
- etc



100 % RE system in a sustainable way

.... taking all environmental and social aspects into account

- **Efficiency first**
- **Solar** – Start w. existing buildings & infrastructure
- **Wind** – Smart location can avoid negative impacts
- **Hydro** – Modern environmental permits
- **Bioenergy** – Biomass from system perspective, only bioenergy w. genuine climate benefits, in efficient plants, taking into account biodiversity and other environmental aspects, etc



Innovation and competitiveness



- Nordic countries top 3 (DK, FIN, SE)
- Poland "best climber" improved the most since 2014 index
- (Baltic states not part of the survey)
- → Economic growth and RE 100 % can be achieved



Key asks on - Clean energy package for all Europeans

- High ambition for 2030 targets
- Renewable Energy Directive (RED):
45 % binding on EU-level and binding targets
on MS-level
- Energy efficiency (EED):
-40 % binding on EU-level and binding targets
on MS-level



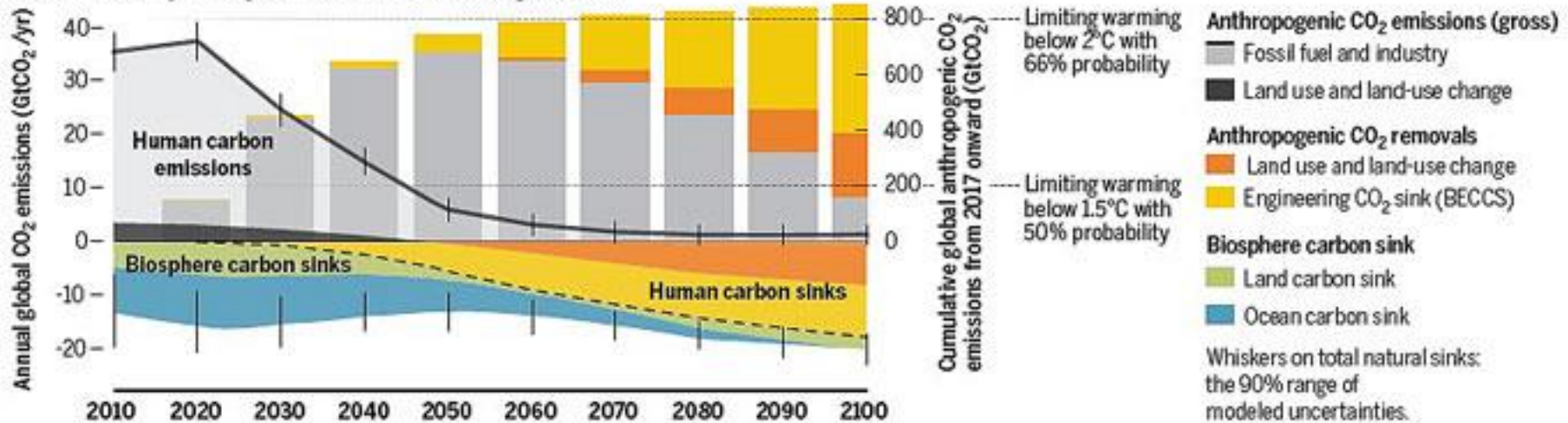
Reserve



Carbon Law – halving emissions each decade, reaching net zero by 2050

- Meeting the ambition of the Paris agreement requires great efforts globally already by 2020

Decarbonization pathway consistent with Paris agreement



Johan Rockström et al, *Science* 24 Mar 2017

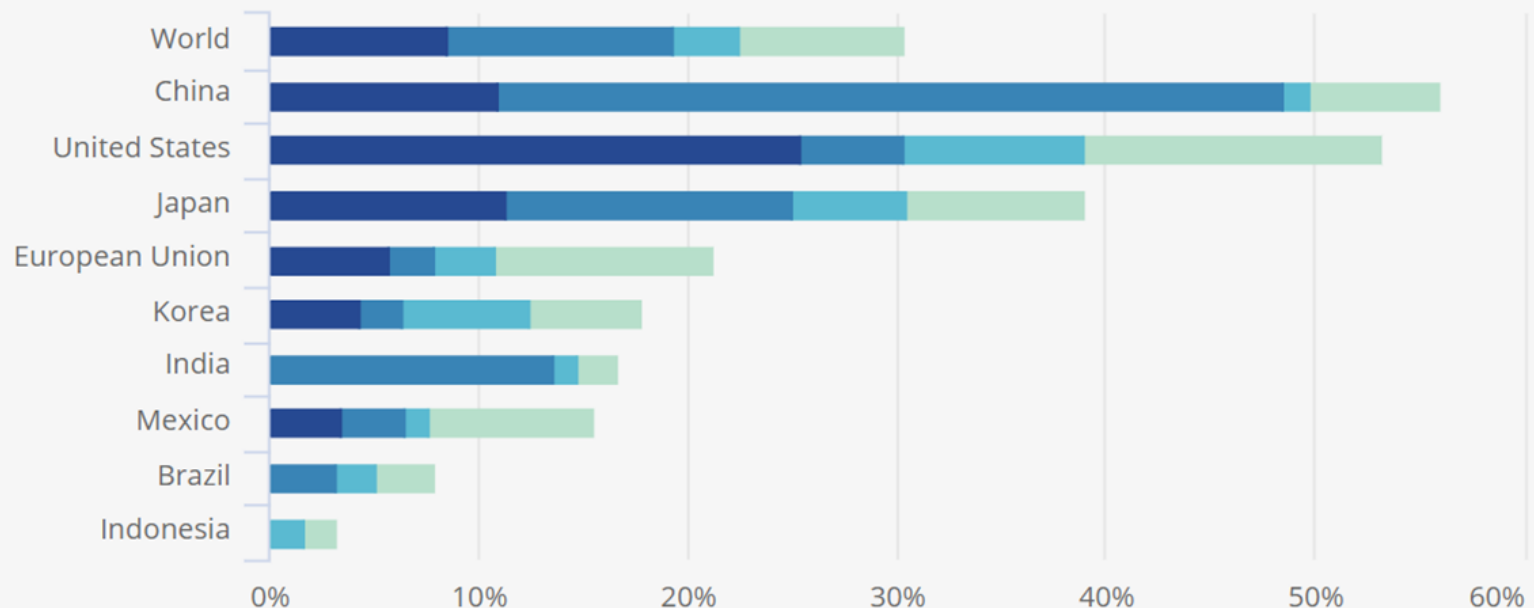


Efficiency first! EU can improve!

Share of energy consumption covered by mandatory energy efficiency policies



Click a policy area in the legend to show/hide in the chart



● Transport ● Industry ● Non-residential buildings ● Residential buildings



Key asks on - Clean energy package for all Europeans

- Renewable Energy Directive (RED)
 - 2030 target : 45 % binding on EU level and binding targets on MS-level
 - Focus on Wind and Solar, only Bioenergy with significant GHG savings
- Energy efficiency (EED),
 - 2030 target : –40 % binding on EU level and binding targets on MS-level
 - Push for annual EE improvements (Art 7 without loopholes)
- Market design
 - Sensible smart retirement of coal power
 - Markets made for renewables and demand flexibility
- Governance
 - Binding 2050 target on EU and MS level (100 % RE) to complement 10y plans & long-term strategy

