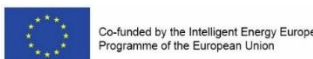


# WP7 Validation of baseline - Grakom

Copenhagen

26-27 September 2016



# Application – Expected energy reductions

- 40.000 GJ of yearly potential energy savings per 100 SMEs during the project lifetime
- 880 ton CO2 potential emission reduction each year per 100 SMEs during the project lifetime
- 915.000 € of potential decreasing yearly energy costs per 100 SMEs during the project lifetime

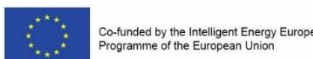


# WP2: Energy diagnosis - updating baseline

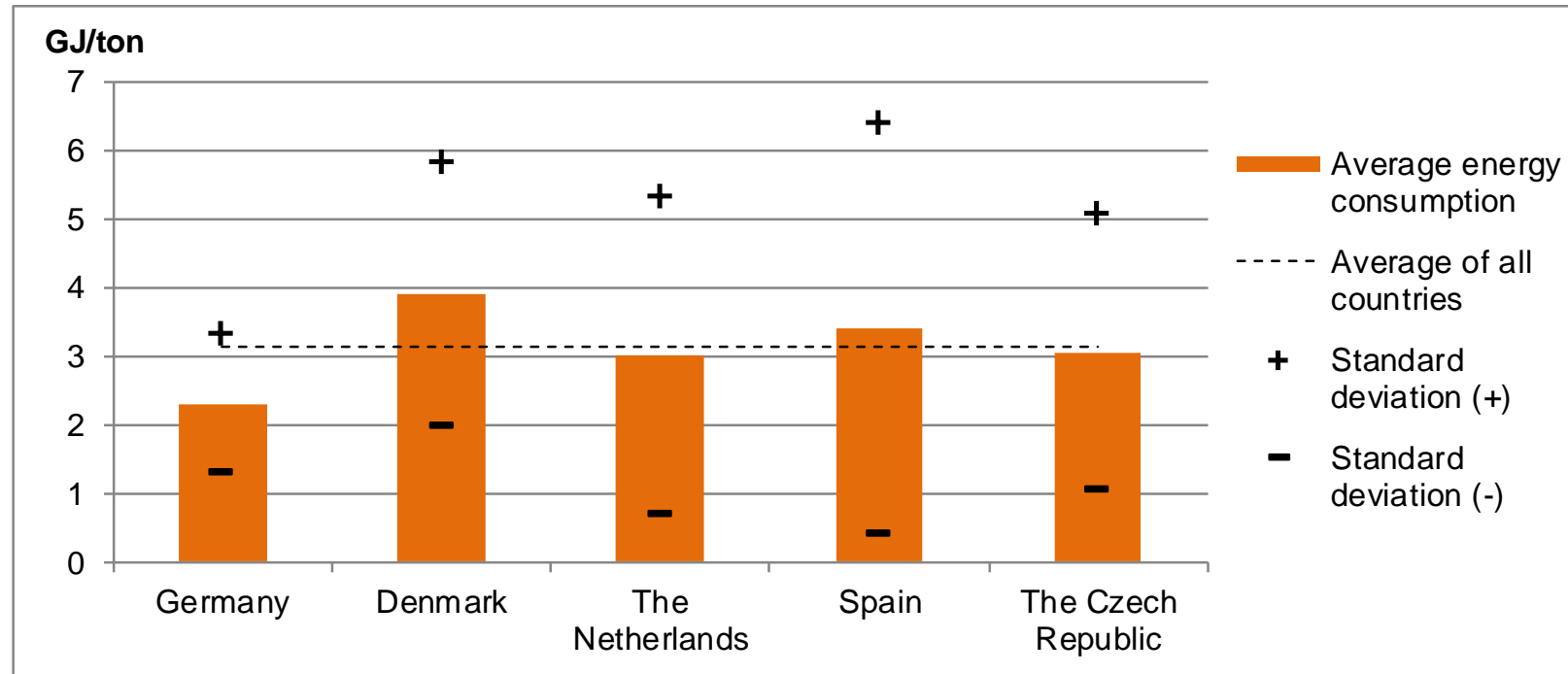
- WP2 summary: Only common indicator for baseline definition available from EEI and ClimateCalc:

$$\text{Baseline (KPI)} = \frac{\text{Total energy [GJ]}}{\text{Paper consumed [ton]} - \text{Paper waste [ton]}}$$

- Problems with the indicator:
  - Summarized energy for process and heating
  - Based on weight where the thickness varies
  - Based on paper waste which varies with the products and the quality



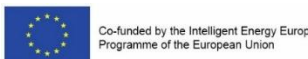
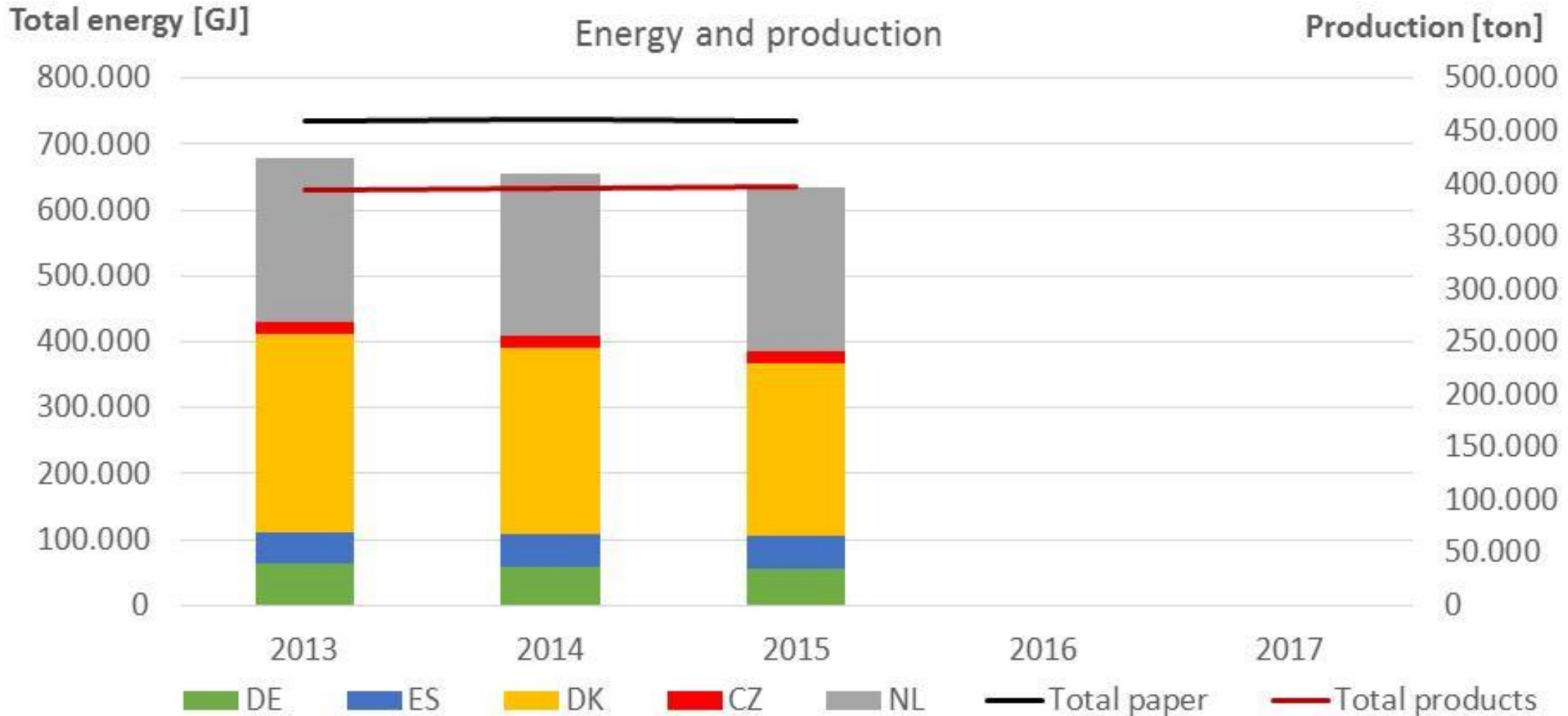
# WP2: Energy diagnosis - updating baseline



- The experience with the KPI must be taken into consideration in WP3: Indicators.
- WP2 summary: The baseline must be updated with data from the 100 companies after WP6.



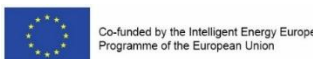
# Total energy consumption in EMSPI SME's



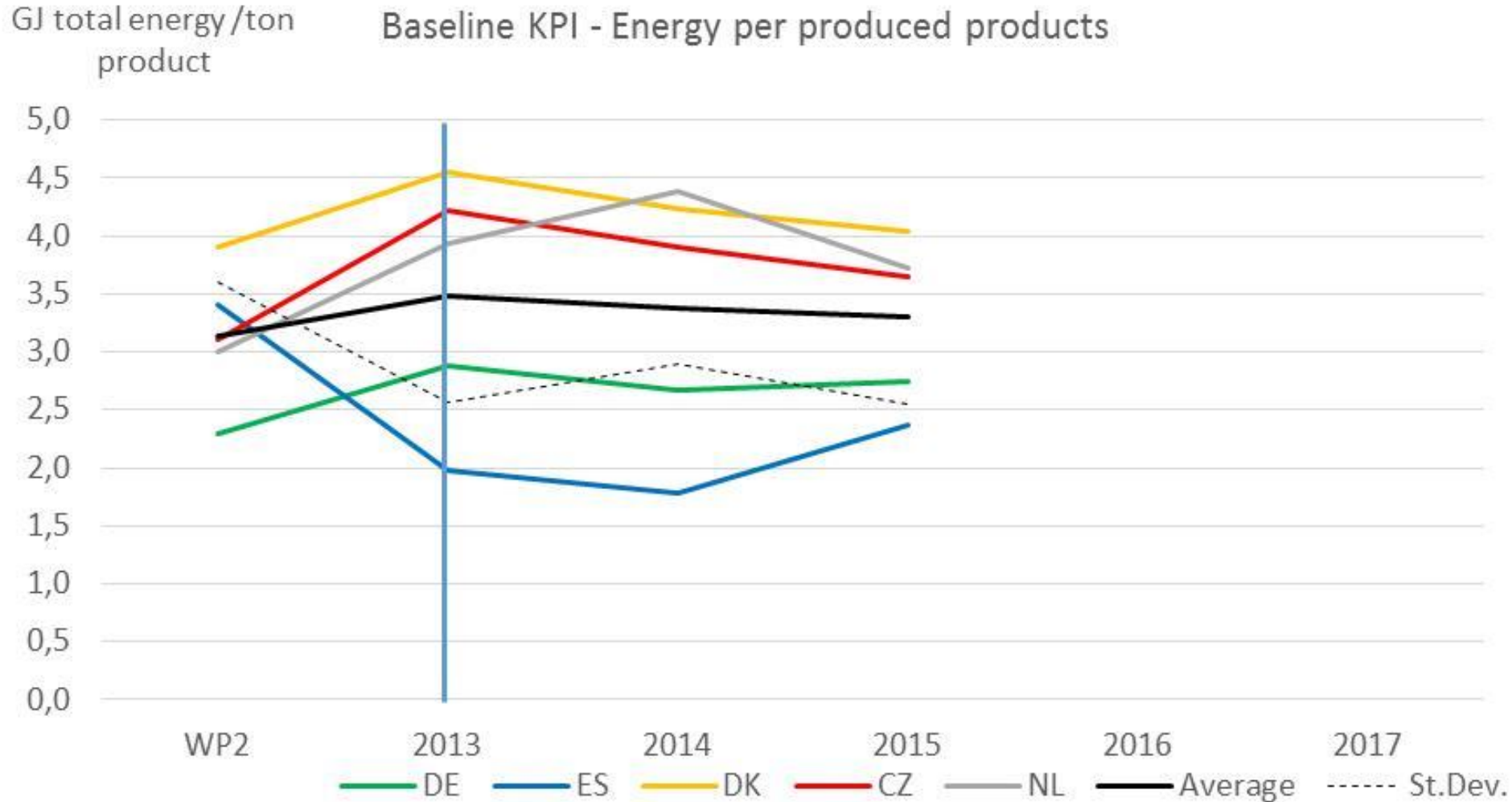
# Total energy consumption in EMSPI SME's

Number of companies	Total	Complete
DE	15	14
ES	17	16
DK	19	19
CZ	9	7
NL	19	15
<b>Total</b>	<b>79</b>	<b>71</b>

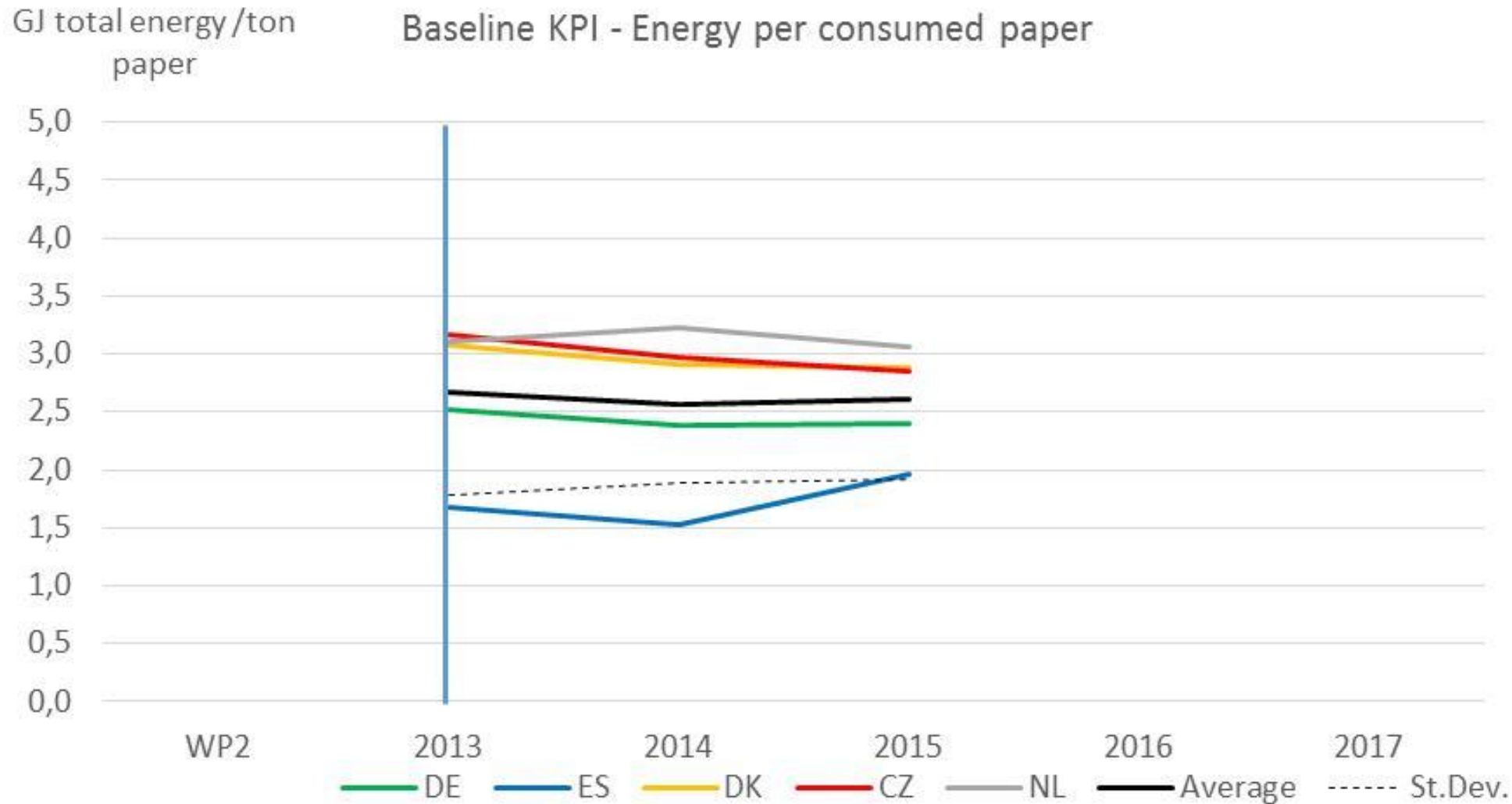
Changes		
Total energy 2013-2015	GJ	-46.405
Total energy 2013-2015	%	-7%
Total production 2013-2015	ton	4.103
Total production 2013-2015	%	1%



# Baseline - KPI analysis



# Baseline - KPI analysis

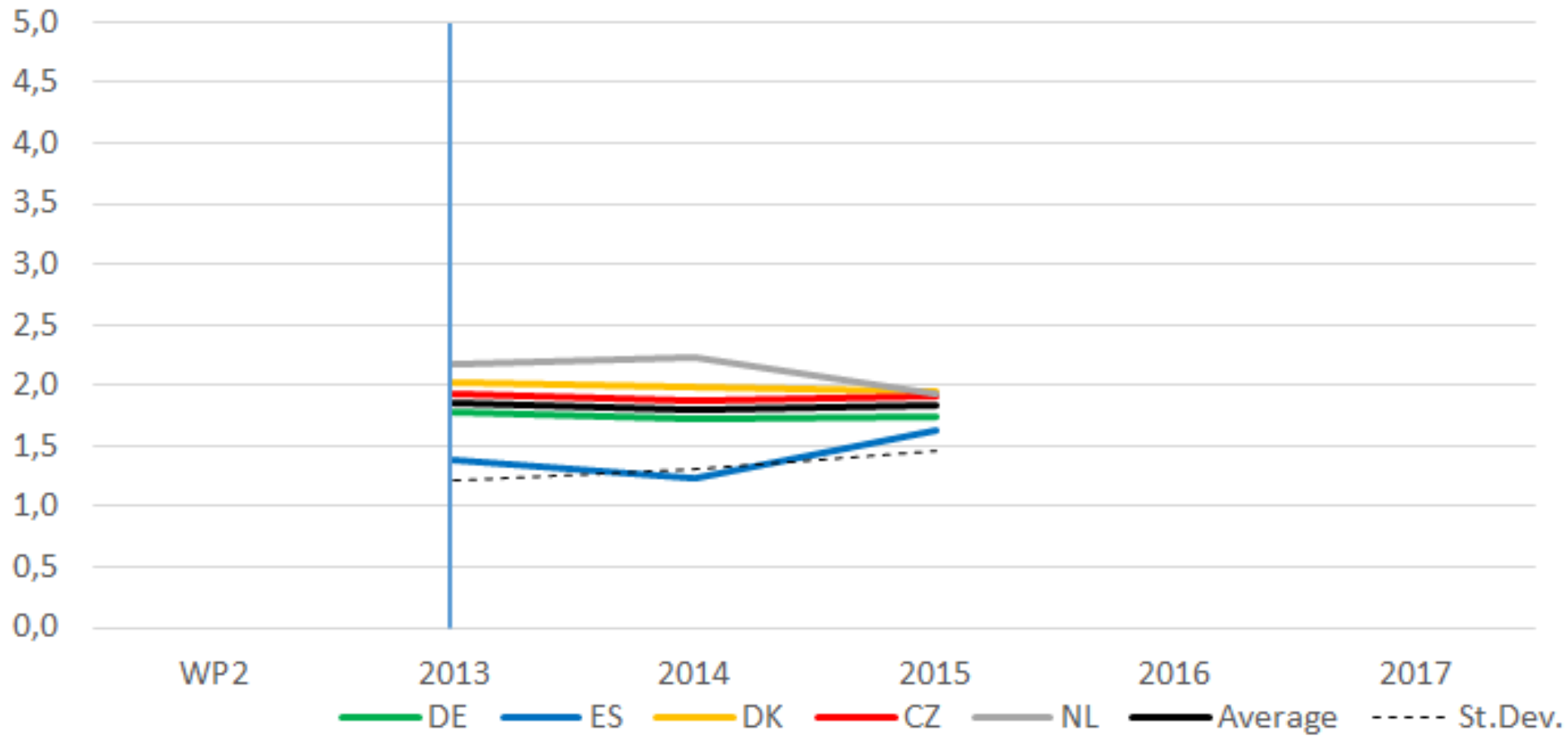




# Baseline - KPI analysis

GJ electricity/ton  
paper

Baseline KPI - Electricity per consumed paper



# Baseline - KPI analysis

- The KPI varies with the type of companies.
- Data quality for WP2 baseline is an issues.
- The baseline must be calibrated based on data for the participating companies with 2013 as starting point.
- The baseline should be changed to:

$$\text{Baseline (KPI)} = \frac{\text{Total energy [GJ]}}{\text{Paper consumed [ton]}}$$



# Energy savings - normalised and weighted

- Data are normalised to the paper consumption of 2013
- KPI is weighted for all companies.

		Total emission			Total reduction	
		2013	2014	2015	2013-2014	2013-2015
<b>Total</b>	<b>GJ</b>	<b>666.933</b>	<b>653.128</b>	<b>642.272</b>	<b>-13.804</b>	<b>-24.661</b>



# Validation of GHG and economic savings

- How do we do this?

