



SC “ACHEMA” AND EMISSION TRADING SYSTEM

Head of laboratory control center

Dr. Marius Brazlauskas

2015-10-14

1



SC “ACHEMA” AND EMISSION TRADING SYSTEM

Achema is a leading producer of nitrogen fertilizers and chemical products in Lithuania and the Baltics. First construction works of the factory date back to 1962, however **officially the company was founded on February 9, 1965** after the first tonnes of synthetic ammonia were produced in a newly launched ammonia unit.

Achema employs more than 1400 people; annual fertilizer production accounts to about 2.7 million tonnes.

Achema is mainly engaged in nitrogen fertilizer, fertilizer blends, liquid fertilizer, ammonia, nitric acid, formalin, urea formaldehyde - melamine resin, industrial gases, and aluminium sulphate solution production.



2



SC “ACHEMA” AND EMISSION TRADING SYSTEM

From 1998 **Quality Management System** are implemented according
ISO 9001 standard requirements

From 2000 **Environmental Management System** are implemented according
ISO 14001 standard requirements

From 2007 **Occupational Health and Safety Management System** are
implemented according OHSAS 18001 standard requirements

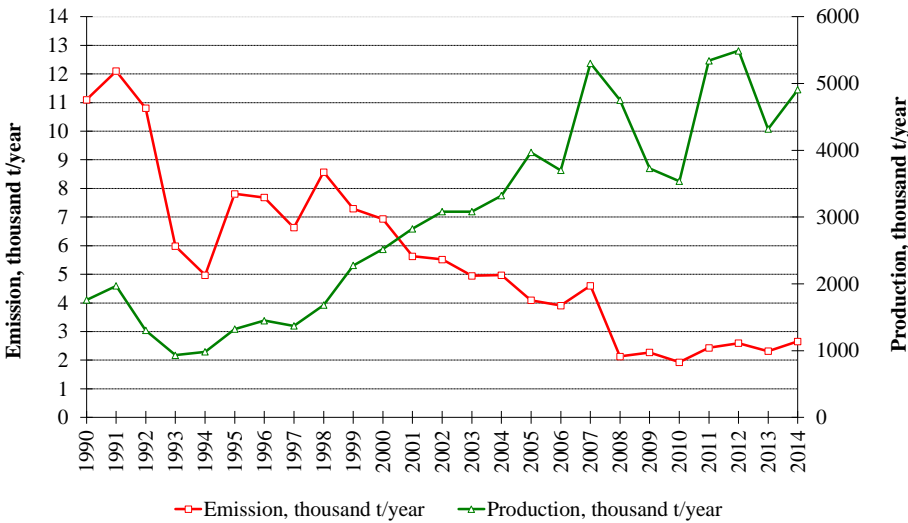
In 2004 was issued **Integrated Pollution Prevention and Control
Permit No. 2/15**

SC “Achema” is the member of **International Fertilizers Association (IFA)**,
European Fertilizers Manufacturers Association (Fertilizers Europe)

3



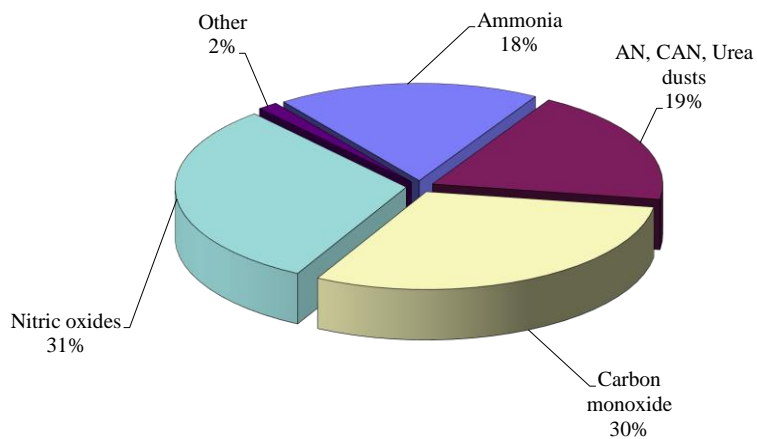
SC “ACHEMA” AND EMISSION TRADING SYSTEM



4

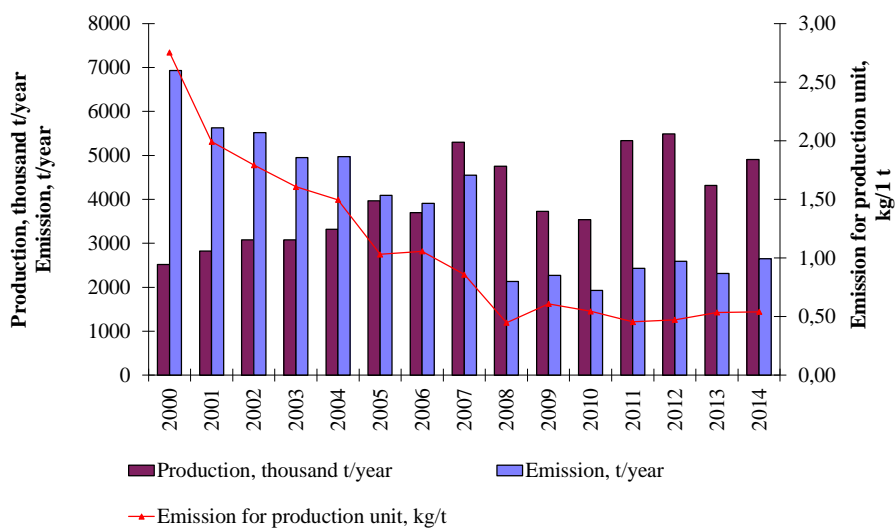
SC "ACHEMA" AND EMISSION TRADING SYSTEM

The main pollutants to the atmosphere



5

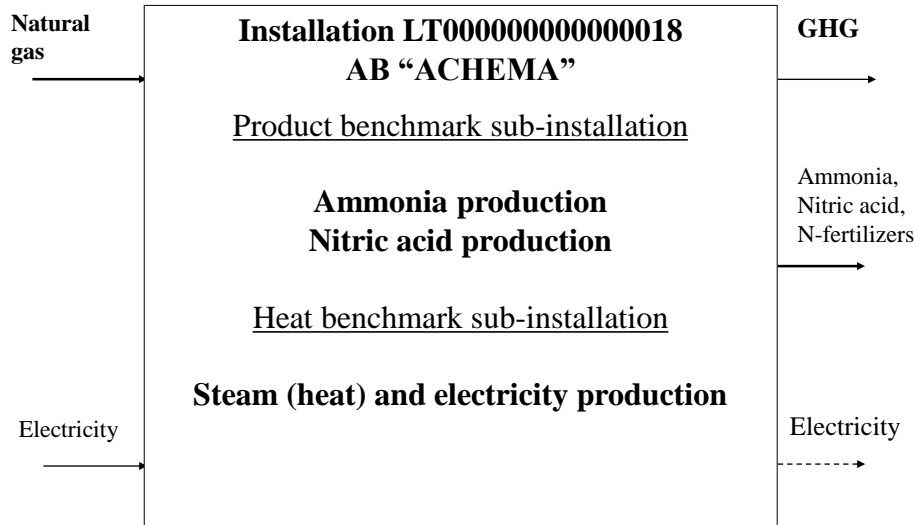
SC "ACHEMA" AND EMISSION TRADING SYSTEM



6



SC "ACHEMA" AND EMISSION TRADING SYSTEM

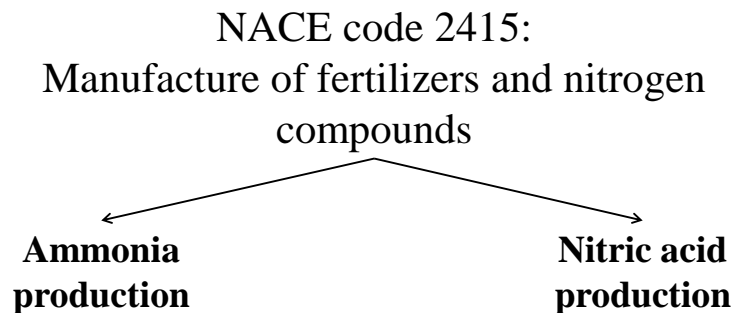


7



SC "ACHEMA" AND EMISSION TRADING SYSTEM

***Commission Decision No 2010/2/EU* determines the list of sectors and subsectors which are deemed to be exposed to a significant risk of carbon leakage**



8



SC “ACHEMA” AND EMISSION TRADING SYSTEM

Benchmark is the value used to calculate free allocation per installation

Product benchmark is reflecting the average GHG emission performance of the 10 % best performing installations in the EU producing that product

Ammonia product benchmark was set regardless to raw material. 10 % installations present only 4 from 35.

Nitric acid product benchmark set in spite of already implemented emission reduction technologies. 10 % installations present only 6 from 103

2011/278/EU - 1,619 tCO₂/t NH₃

2011/278/EU - 0,302 tCO₂/t HNO₃

SC “Achema” - 2,05 tCO₂/t NH₃

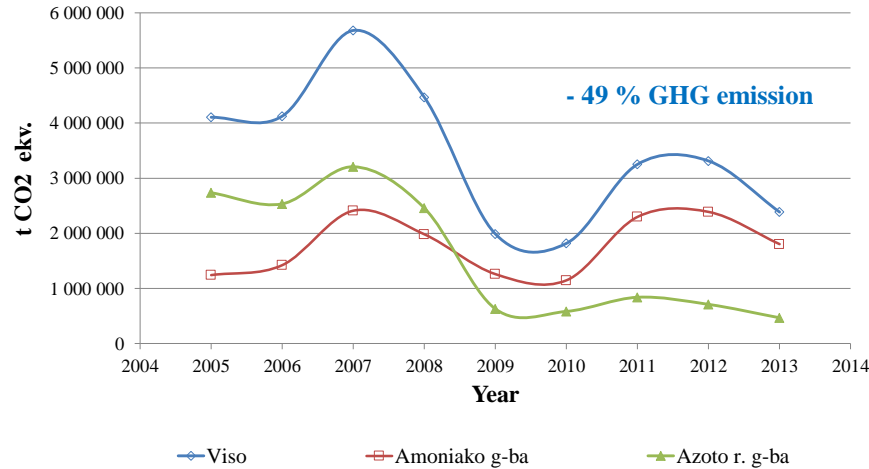
SC “Achema” - 0,49 tCO₂/t HNO₃

9



SC “ACHEMA” AND EMISSION TRADING SYSTEM

GHG emission of SC “Achema”

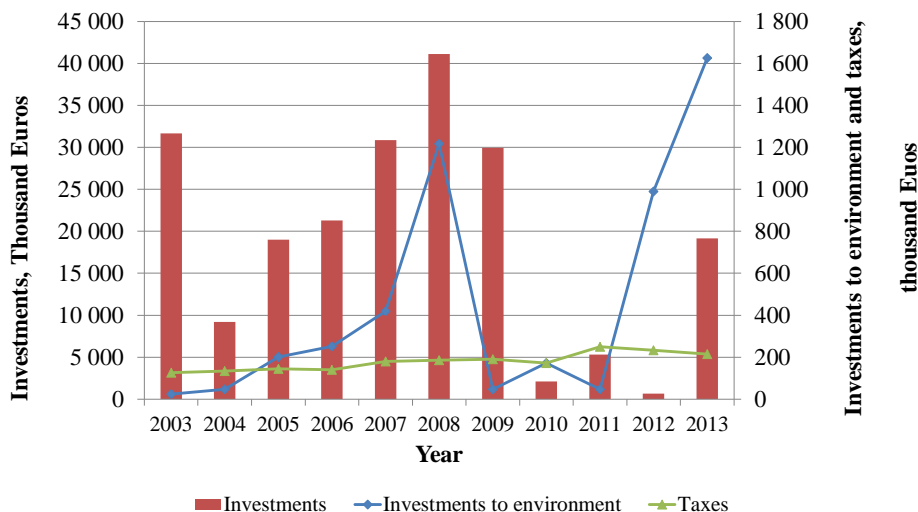


10



SC "ACHEMA" AND EMISSION TRADING SYSTEM

SC "Achema" investments



11



SC "ACHEMA" AND EMISSION TRADING SYSTEM

Cross sectorial correction factor settled by European Commission Decision 2013/448/EU significantly reduced free allocation of GHG emission allowances

**Free allocation of GHG emission allowances for the 2013-2020 period were reduced by 11,6 %:
from 17 711 235 till 15 715 939 EUA.**

12



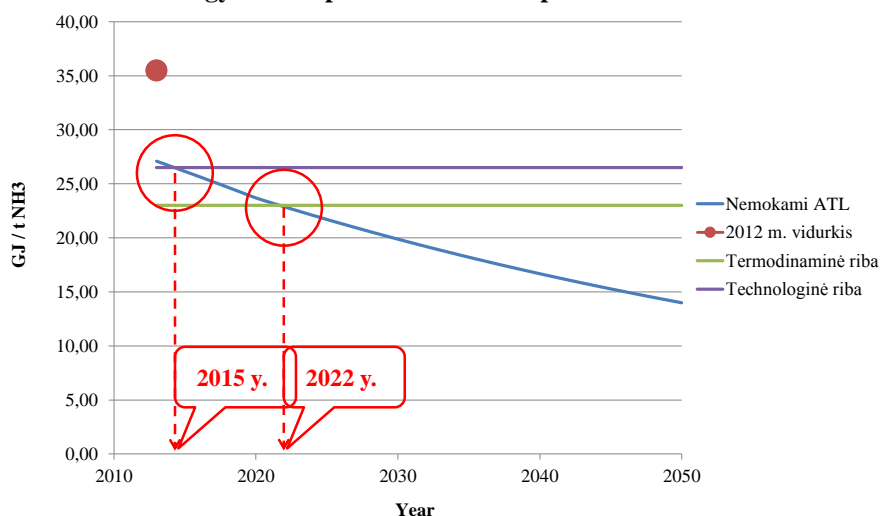
SC "ACHEMA" AND EMISSION TRADING SYSTEM

	Year								TOTAL
	2013	2014	2015	2016	2017	2018	2019	2020	
Request for EC	2 223 119	2 220 487	2 217 852	2 215 220	2 212 589	2 209 957	2 207 321	2 204 690	17 711 235
Certified amount of EUA	2 106 249	2 066 309	2 026 057	1 985 546	1 944 756	1 903 725	1 862 343	1 820 954	15 715 939
Consumption of natural gas, m³	1 084 133	1 172 435	1 197 614	1 233 847	1 211 911	1 209 987	1 208 098	1 206 254	9 524 279
Emitted tones of CO₂	2 051 237	2 384 294	2 371 276	2 443 016	2 399 585	2 395 775	2 392 034	2 388 383	18 825 599
Emitted tones of CO₂ from ammonia production	1 806 138	2 068 242	2 067 950	2 359 716	2 320 168	2 320 168	2 320 168	2 320 168	17 582 717
Emitted tones of CO₂ eqv. from nitric acid production	335 925	331 783	339 500	336 000	334 250	332 500	330 750	329 000	2 669 708
Total amount of EUA	2 387 162	2 716 077	2 710 776	2 779 016	2 733 835	2 728 275	2 722 784	2 717 383	21 495 307
EAU balance	-280 913	-649 768	-684 719	-793 470	-789 079	-824 550	-860 441	-896 429	-5 779 368



SC "ACHEMA" AND EMISSION TRADING SYSTEM

Energy consumption of ammonia production





SC “ACHEMA” AND EMISSION TRADING SYSTEM

STATE AID MEASURES

European Commission Communication 2012/C 158/04

Aid in sectors and subsectors deemed to be exposed to a significant risk of carbon leakage due to EU ETS allowance costs passed on in electricity prices will be significant to SC “Achema”

- Ministry of economy was assigned as responsible for state aid measures after the years of negotiations;
- The mechanism for state aid is not appointed;
- The expenses due to EU ETS allowance costs passed on in electricity prices are today;
- Germany, Norway, United Kingdom has state aid mechanism.

15



SC “ACHEMA” AND EMISSION TRADING SYSTEM

STATE AID MEASURES

	2013	2014	2015	2016	2017	2018	2019	2020
Electricity consumption forecast, MWh	276 000	377 500	392 000	392 000	392 000	392 000	392 000	392 000
Amount of EUA	165 600	226 500	235 200	235 200	235 200	235 200	235 200	235 200
Annual price of EUA, EUR	10	14,5	20	20	20	20	20	20
Payment for EUA, EUR	1 656 000	3 284 250	4 704 000	4 704 000	4 704 000	4 704 000	4 704 000	4 704 000
Possible compensation, %	85	85	85	80	80	80	75	75
Sum for compensation, EUR	1 407 600	2 791 613	3 998 400	3 763 200	3 763 200	3 763 200	3 528 000	3 528 000
Total sum for compensation, EUR	27 176 633							

16



SC “ACHEMA” AND EMISSION TRADING SYSTEM

Factors affecting the competitiveness:

- High energy prices;
- Instability of climate change policy;
- Disagreement on international climate change policy;

17



SC “ACHEMA” AND EMISSION TRADING SYSTEM

Key challenges in shaping the EU's climate change and energy policies are:

- Secure of energy supply stability, economic competitiveness and investments
- Operation of electricity and gas internal market based on competitive energy prices;
- For achieving the objectives secure effective economic instruments and financing structures;
- Climate change and energy policy integration into all major sectors of global economy.

18



EU CLIMATE CHANGE AND ENERGY POLICY BOOSTING
THE COMPETITIVENESS: IS IT POSSIBLE?

**Thank You for your
attention**