

“Emissions Reduction Potentials for SF₆ in Germany”



Katja Schwaab
German Federal Environmental Agency

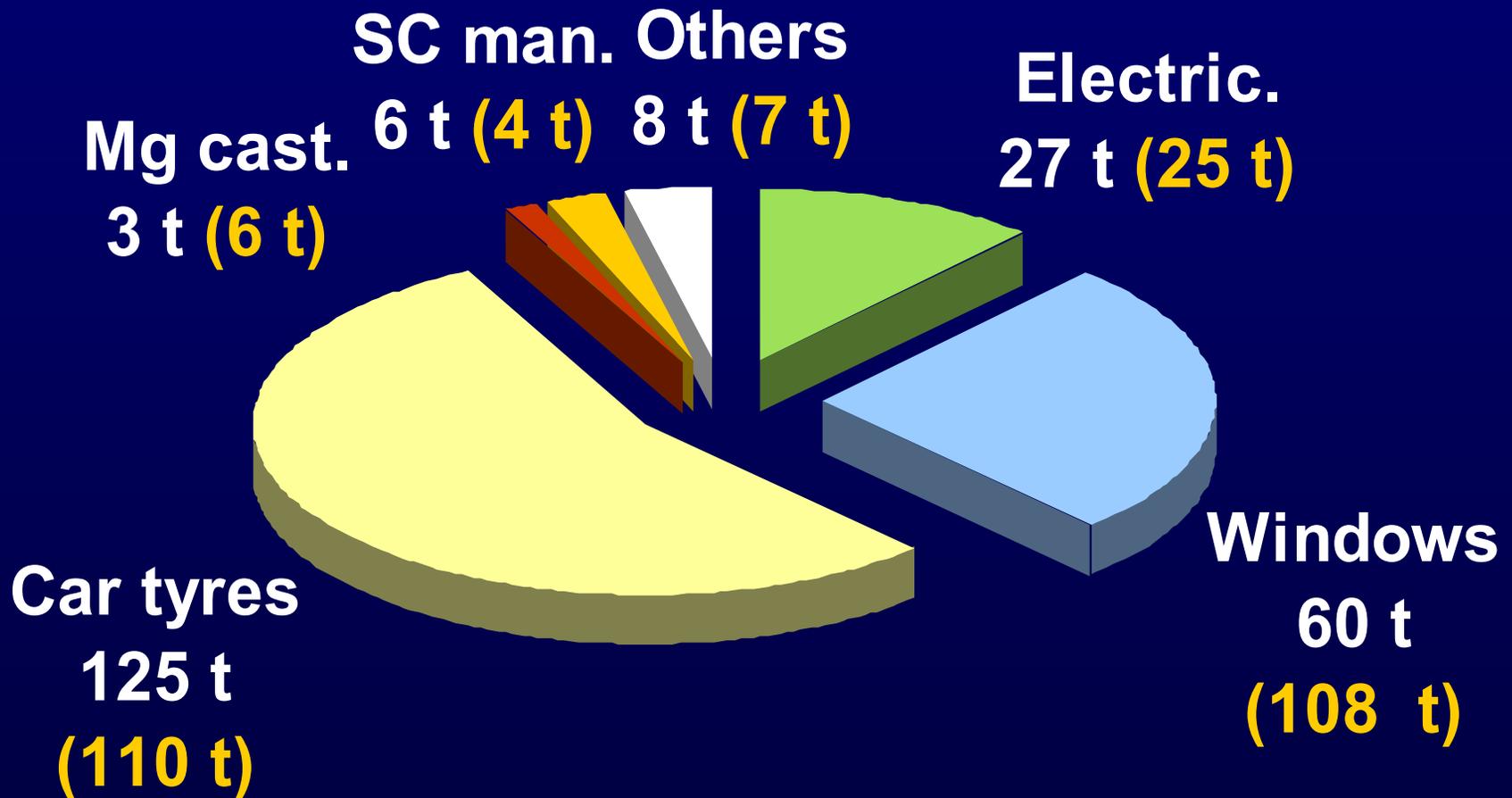
November 1-2, 2000:

**SF₆ and the Environment:
Emission Reduction Strategies**

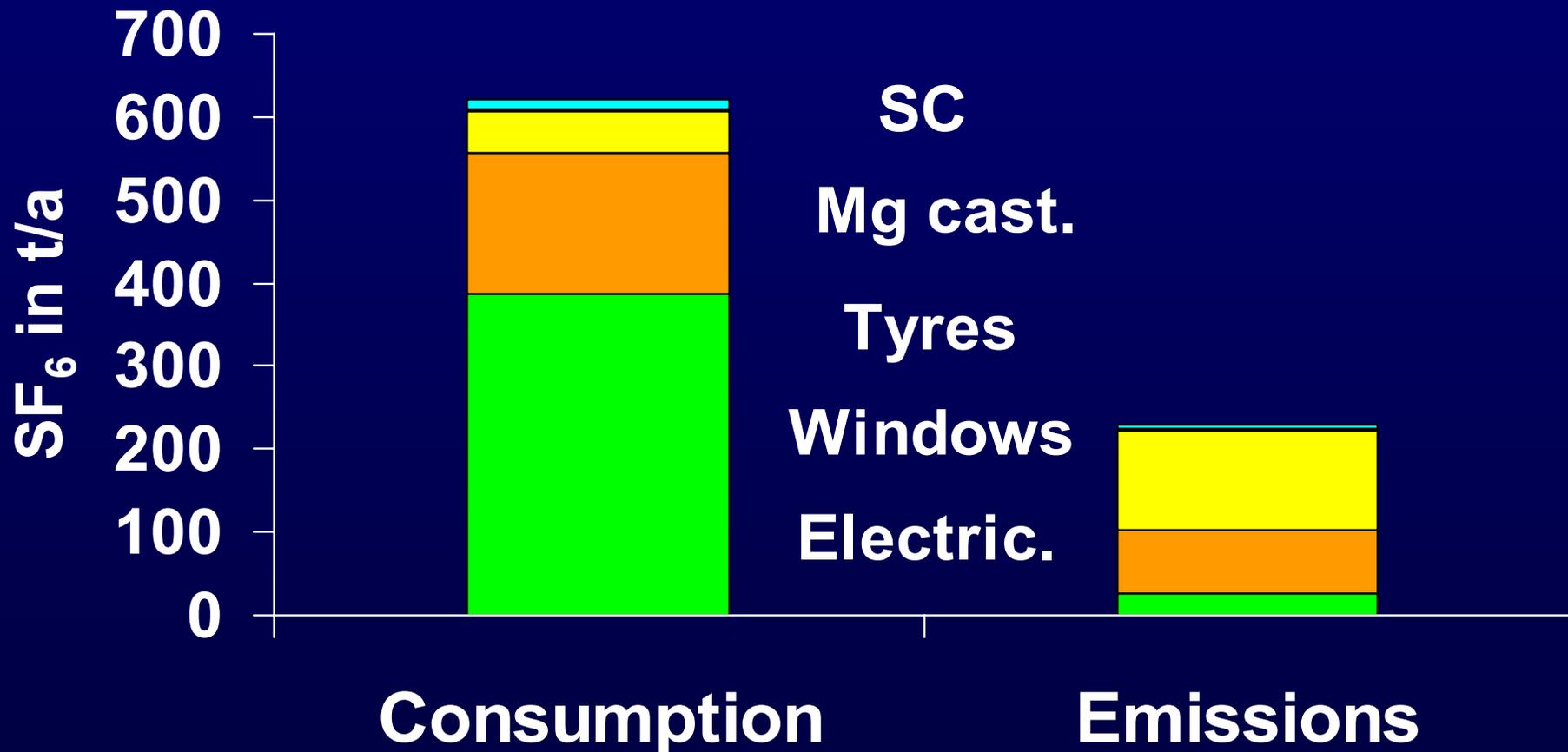
SF₆-Emissions Reduction Potential in Germany

- ❖ **Introduction**
- ❖ **Consumption and emissions of SF₆ in Germany – an overview**
- ❖ **Emission forecast**
- ❖ **Measures and reduction potentials in Germany**
- ❖ **Conclusions**

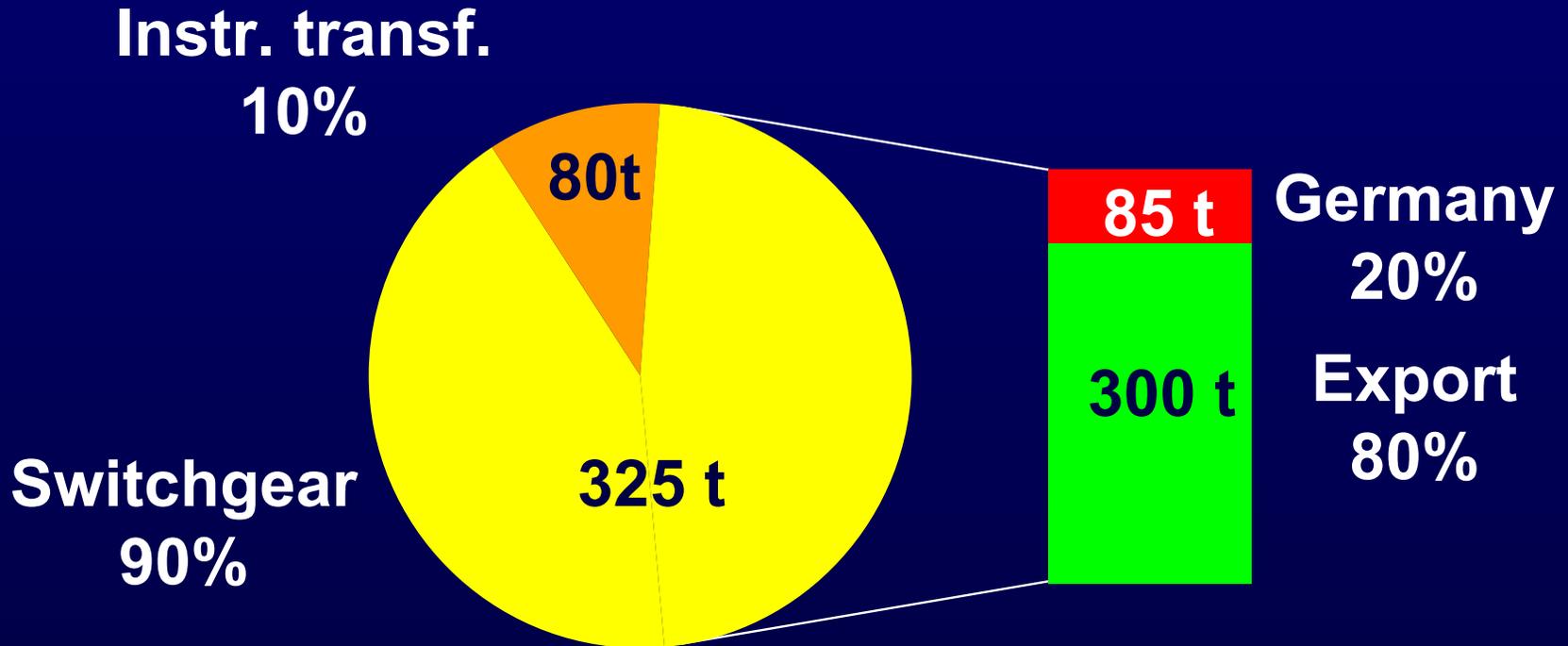
SF₆ Emissions by Source in Germany in 1998 (1995)



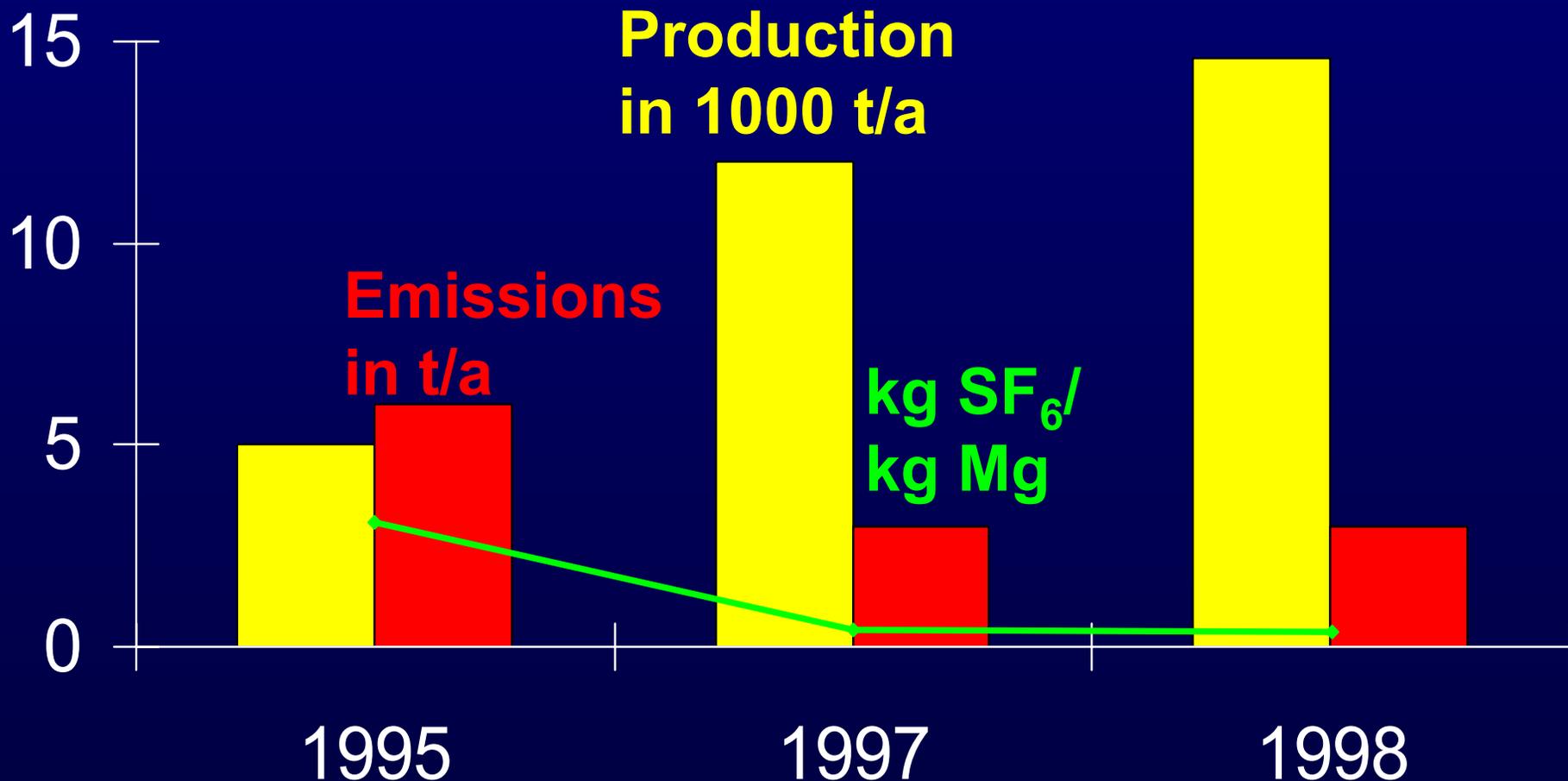
Emissions and Consumption of SF₆ in Germany in 1997



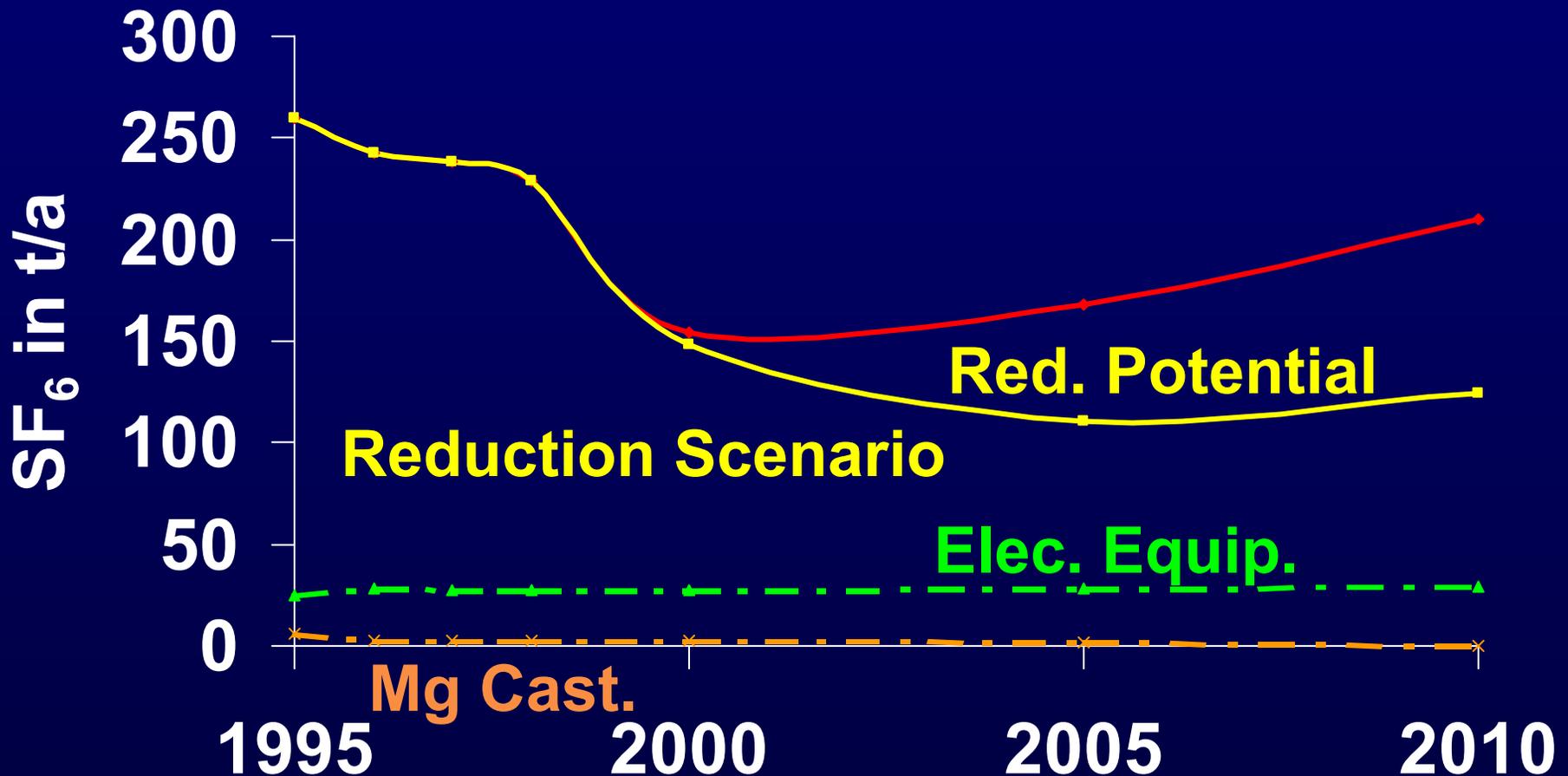
1997 SF₆ Consumption in the Electrical Equipment Sector



1995-1997 Changes in Magnesium Casting in Germany



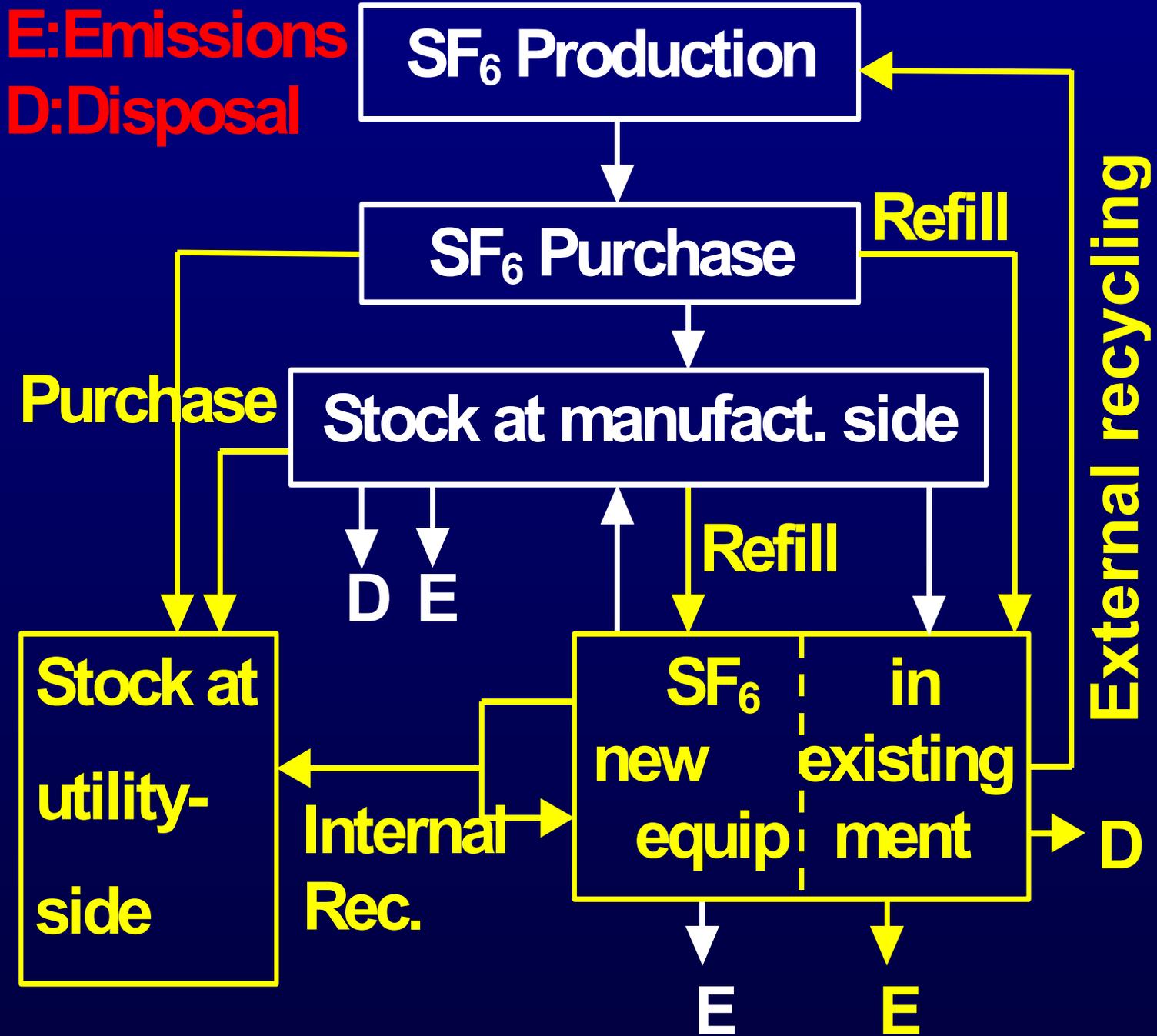
SF₆ Emission Forecast



Electrical Equipment

- ❖ On-site recycling
- ❖ Declaration on the use of SF₆
 - **Manufacturers guarantee a leakage rate of <1%, approx. 0.5%**
 - **SF₆ producers guarantee to take back used SF₆**
 - **Re-use concept**
 - **Monitoring**

Manufacturer
Utility
Monitoring



Policies and Measures for Other Applications

❖ Magnesium casting

- Large-scale foundries: SF₆-saving furnace technology
- Small companies: partly switch over to SO₂

Policies and Measures for Other Applications - 2

❖ Car tyres

- **Ban on SF₆ in this application (under discussion)**

❖ Soundproof windows

- **Give up SF₆ as filling gas (under discussion)**

Conclusions

- ❖ **SF₆ emissions** **260 t in 1995**
 229 t in 1998
- ❖ **Total emissions** **210 t in 2010**
 50 t less than in 1995
- ❖ **SF₆ reduction potential: 86 t/a in 2010**
- ❖ **After 2010** **40 t/a will be avoided**
 additionally – **Re-use concept**
- ❖ **Monitoring**