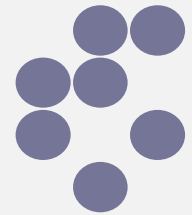


Slovenian energy efficiency action plan in the context of 20/20/20 targets

Andreja Urbančič
Institute Jozef Stefan, Energy Efficiency Centre
Ljubljana

Energy and Climate Policy – Towards a Low Carbon Future,
Salzburg, 16. 9. 2008

Targets for Slovenia



- “Short term”
 - **GHG:** Kyoto,- 8% by 2008-2012
 - **EE:** Energy savings, 9% by 2016
 - **RES:** 12% RES in primary energy; 33,6% RES-E in electricity demand; by 2010

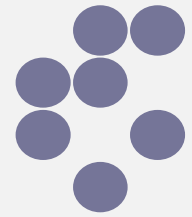
- “Mid term” - 2020
 - **GHG:** EU: 20% reduction from 1990 level; 30% when international agreement signed
SLO: increase limited to +4% (non ETS)
 - **RES** EU: 20% share of RES in final energy use
SLO: 25% share of RES
 - **EE:** 20% final energy savings by new (additional) P&M

National Energy Efficiency Action Plan (NEAP)



- Legal basis: Directive 32/2006/ES on energy end use and energy services; Energy law
- Target:
 - 9% energy savings by 2016
 - Relative to average final energy use in last five years
 - Energy use in installations in EU-ETS excluded
 - Electricity savings can be multiplied by a factor (2,5x)

NEEAP



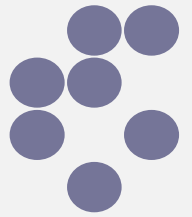
- Financial
 - **Financial incentives** for energy efficiency in all sectors (soft loans, investment incentives) – intensified, scaled up, based also on EU funding
 - Incentives for low income households (new)
 - Feed-in tariffs for RES and CHP (partly element of NEEAP)
 - DSM activities (new)
- Fiscal: **CO₂ tax**
- Regulation/standards: **minimal efficiency standards, building codes; Green public procurement; Labelling**
- Information/promotion/education/demonstration
- R&D

20% Energy Efficiency Improvement in 2020



- Council conclusions, march 2007 and EU Action plan for energy efficiency
- Much more ambitious than actual targets in NEEAP:
 - Higher share (20% vs. 9%)
 - Reference is future, not the past demand
 - Expected to be achieved by additional P&Ms (also additional to Directive 32/2006/ES)

20% Share of RES



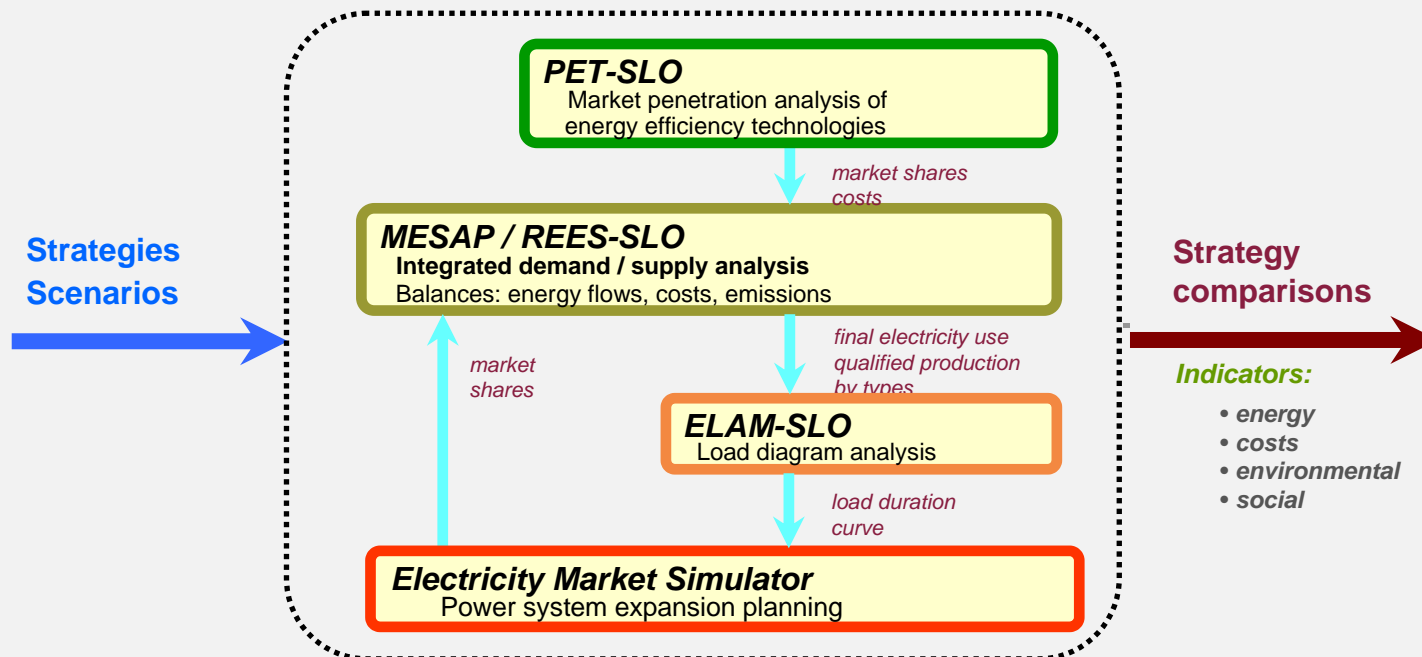
$$\text{Share of RES} = \frac{\text{Energy by RES}}{\text{Final Energy}}$$

- Share depends on growth of both quantities: numerator and denominator

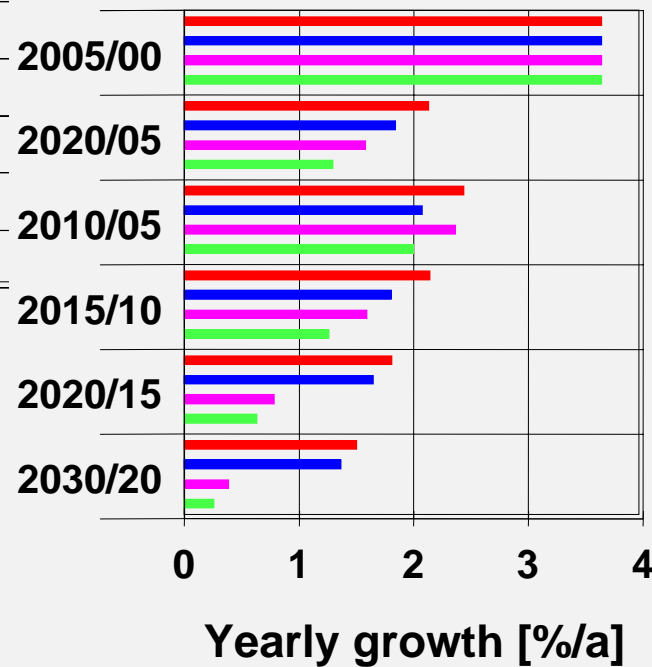
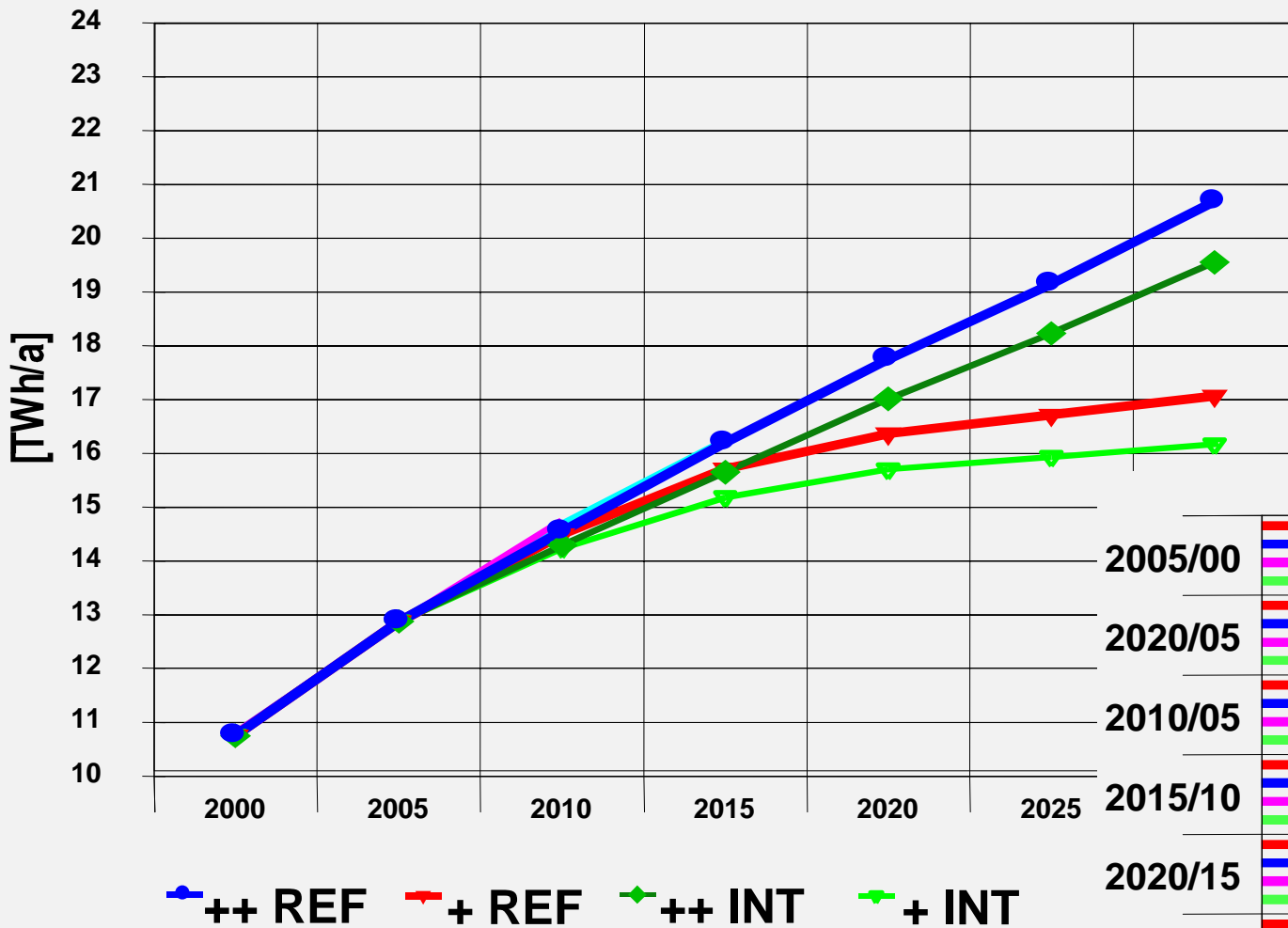
Analysis Results



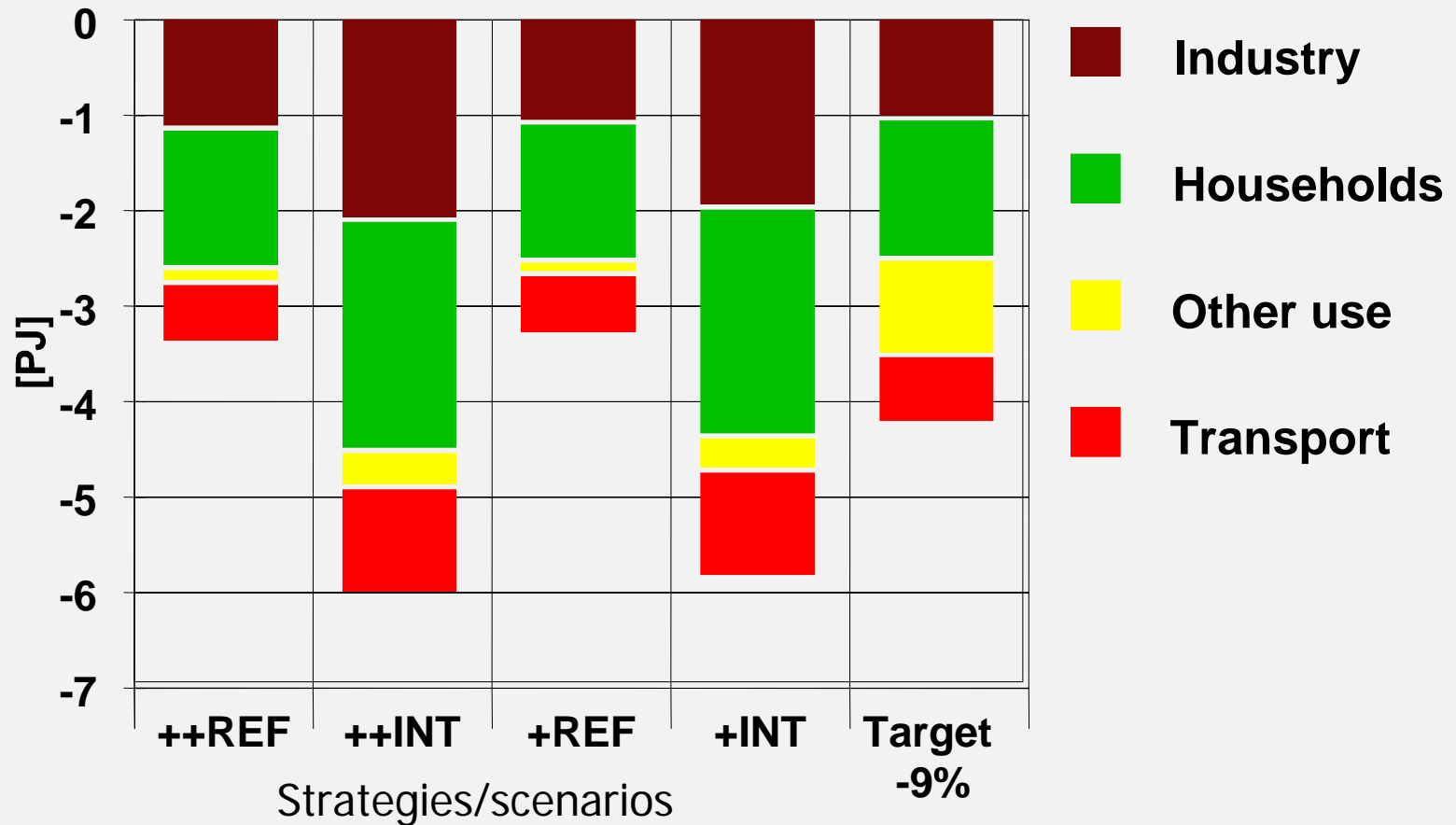
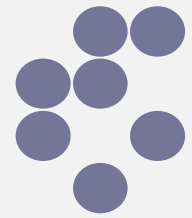
- Long term energy balances for Slovenia by 2030



Final Energy

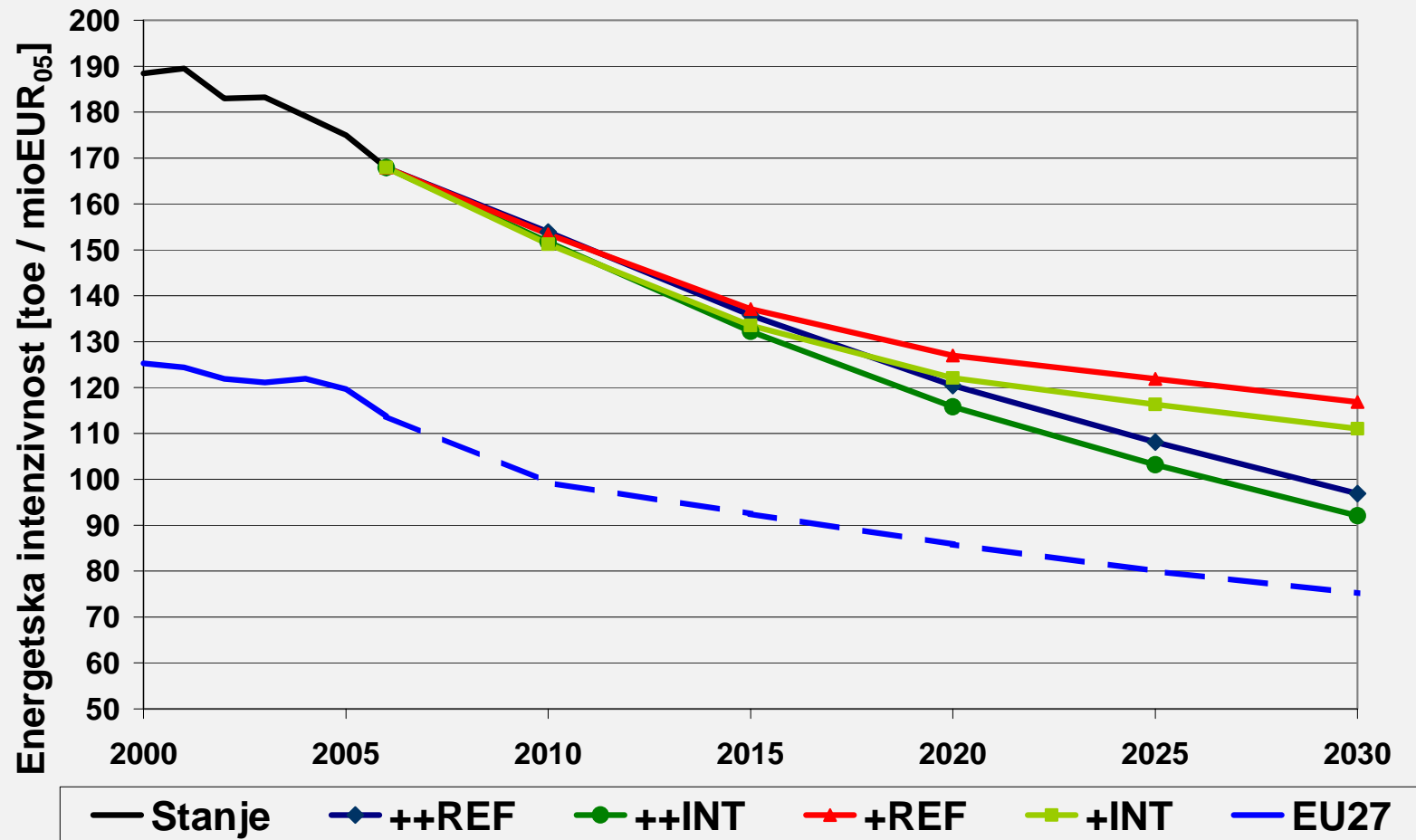
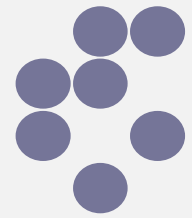


Energy Efficiency Targets

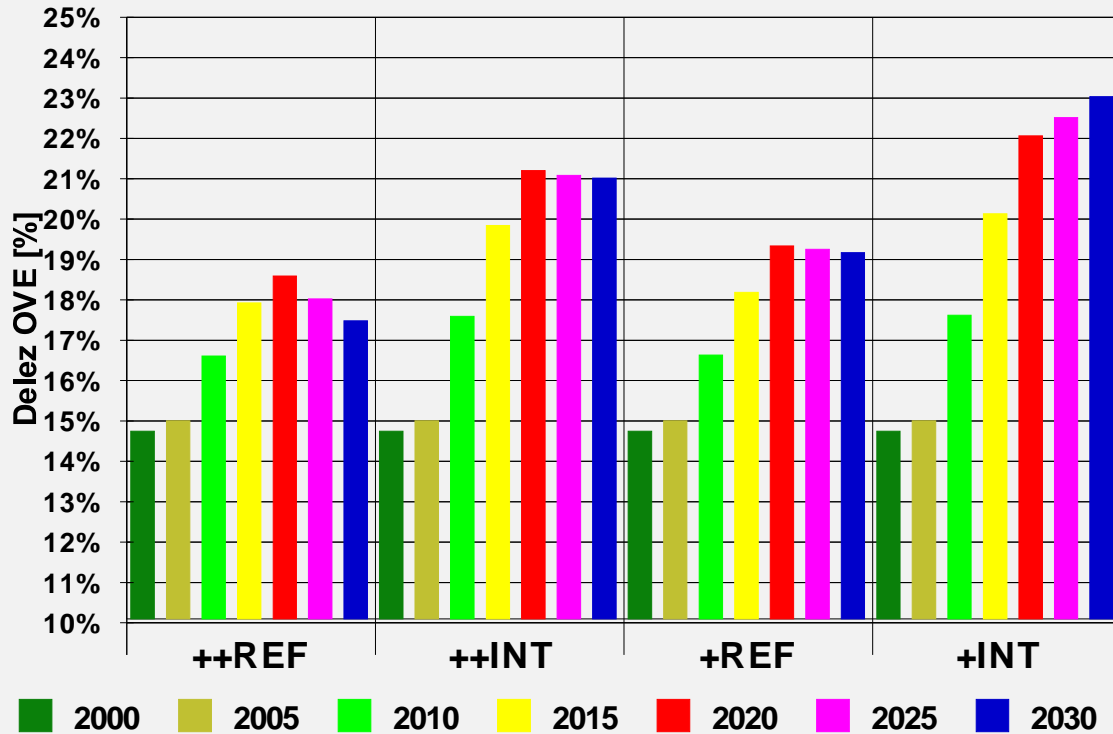
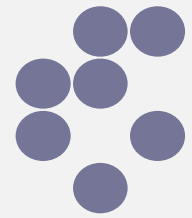


2016

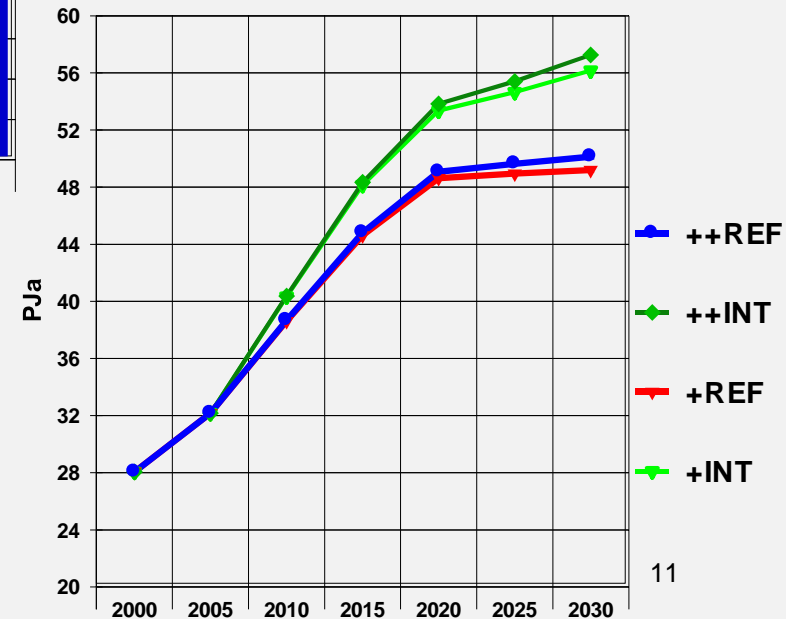
Energy Intensity – Comparison to EU 27



Renewable Energy Share

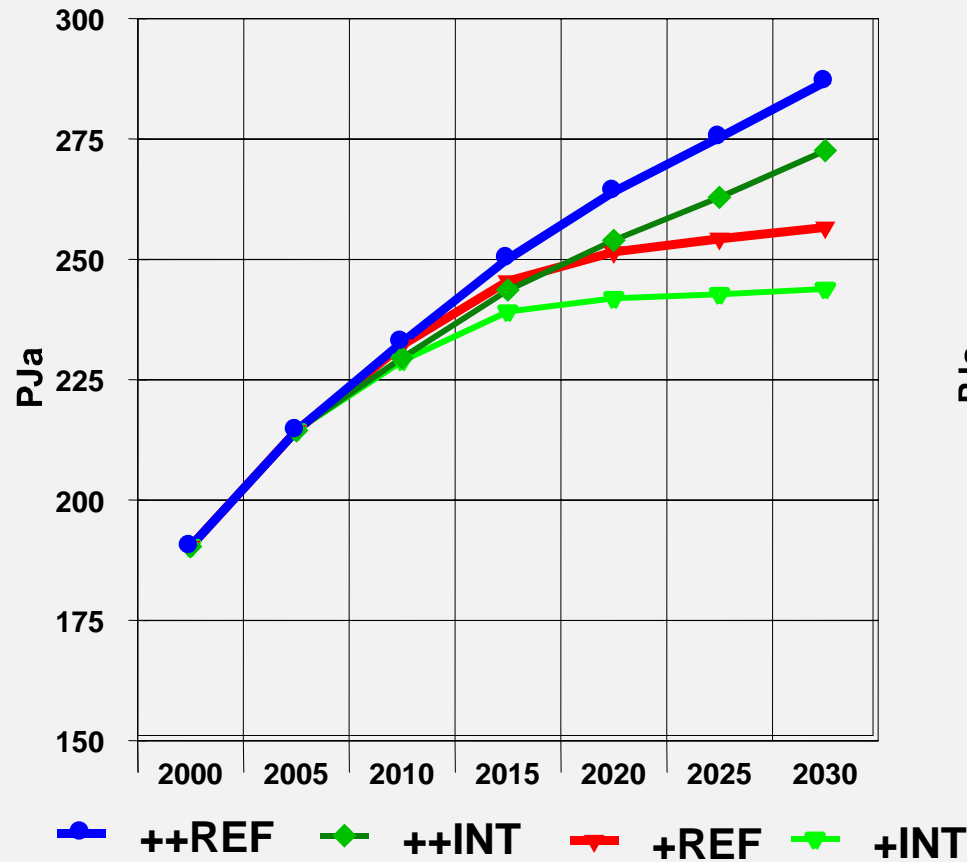
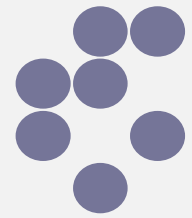


Share of RES in final energy

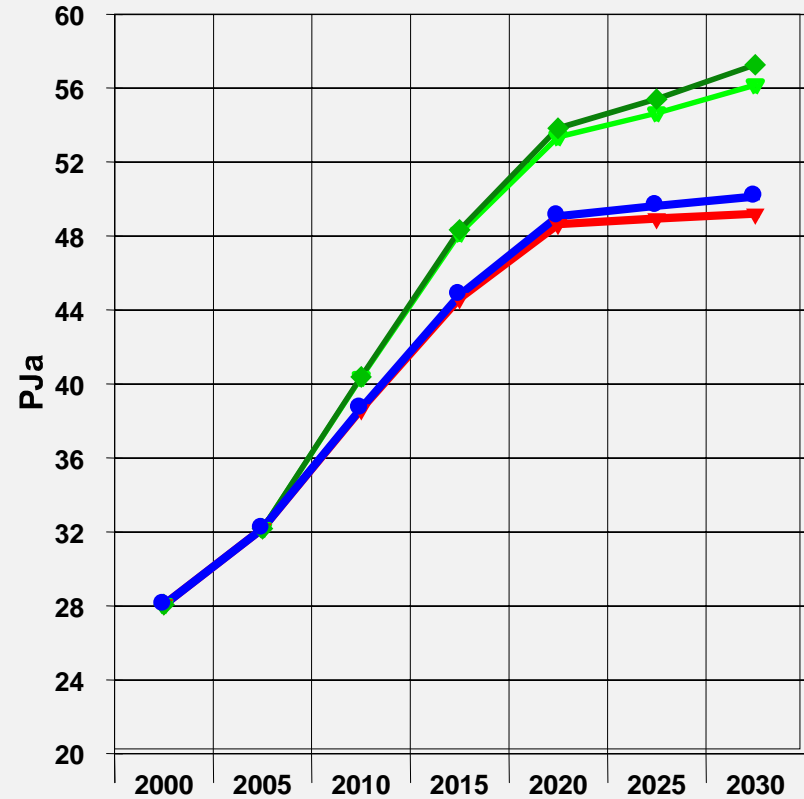


Total RES

RES Growth vs Final Energy Growth

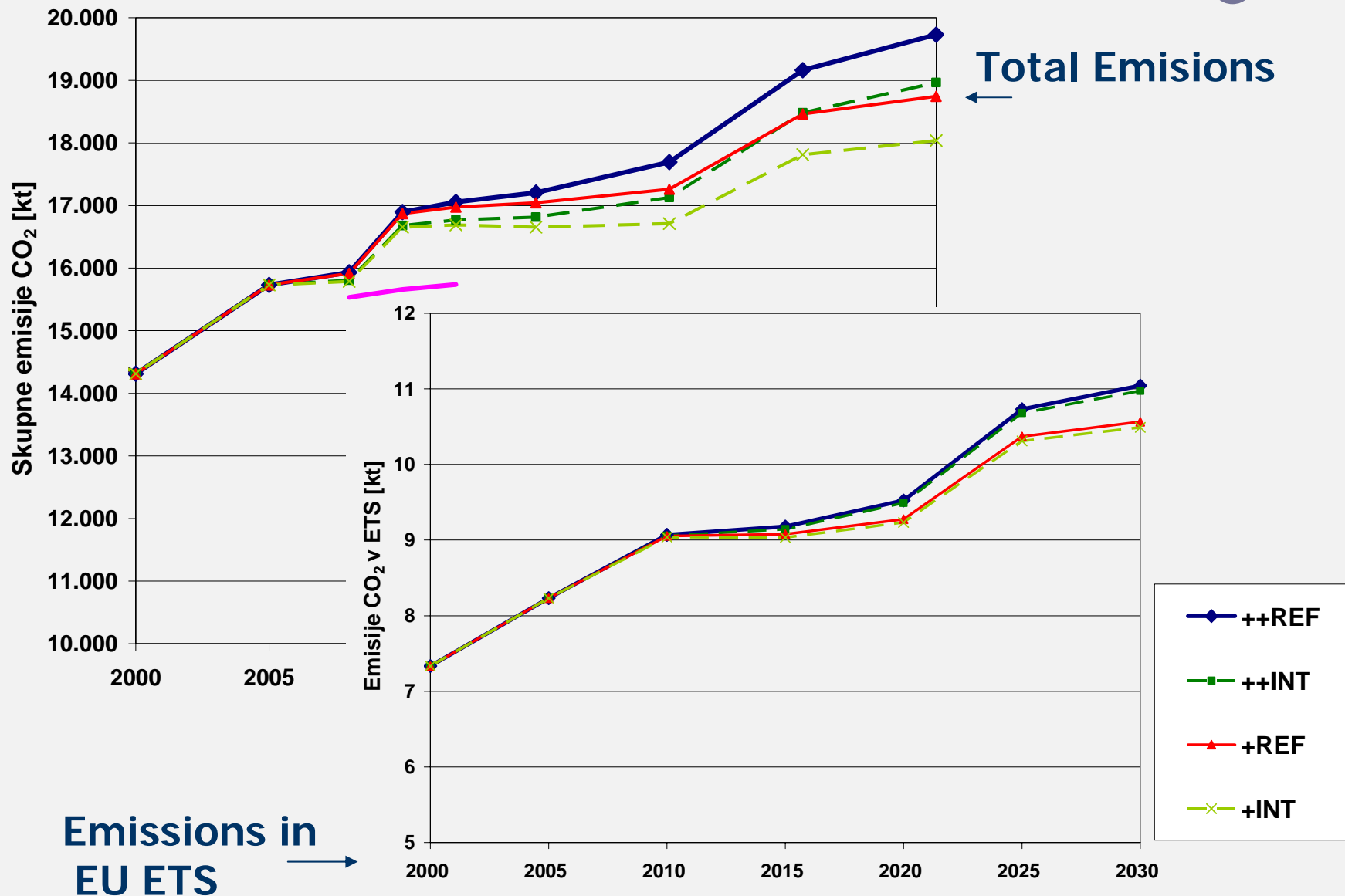


Final energy use

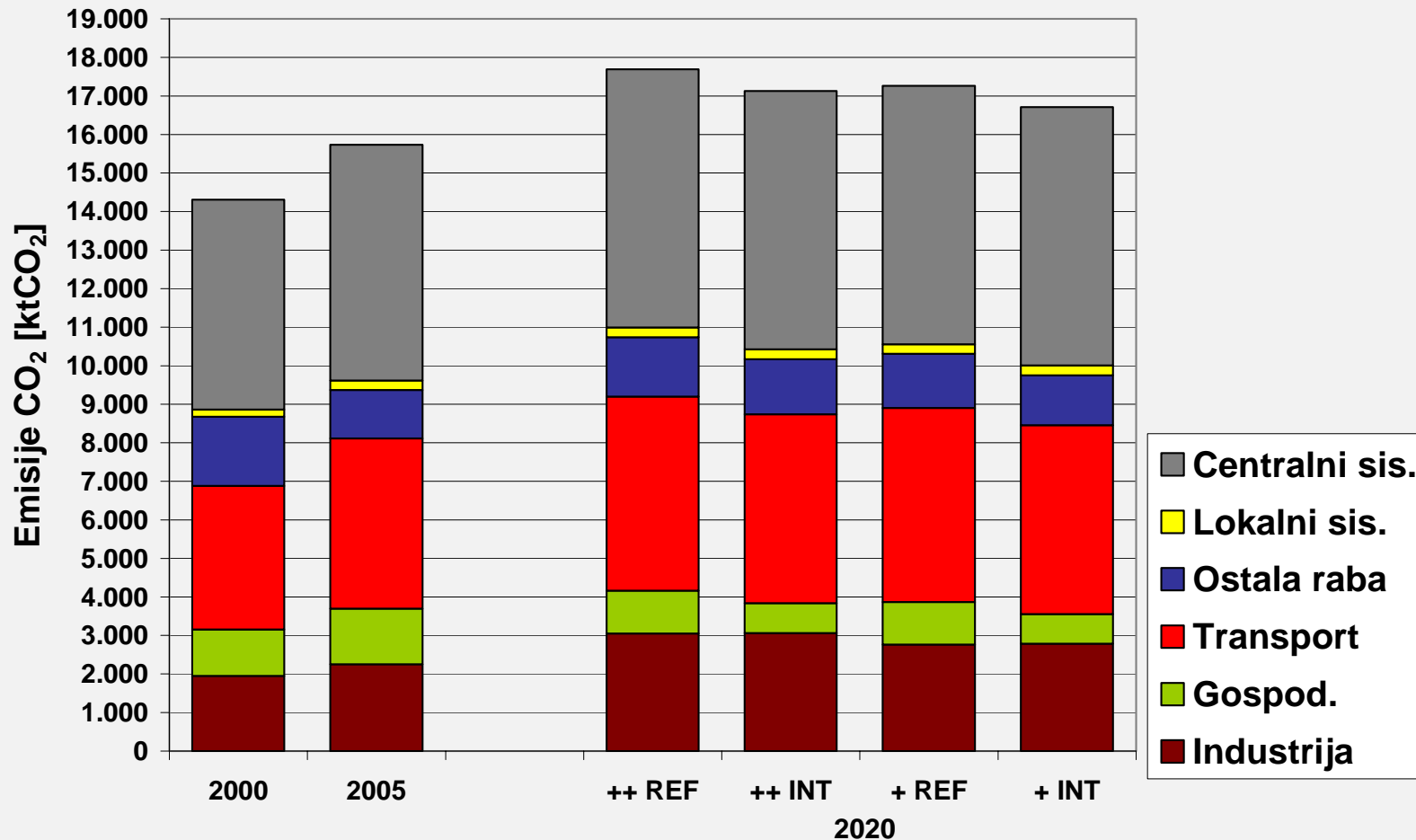


RES use

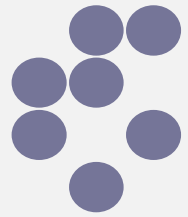
CO₂ Emissions



CO2 Emissions by Sector



20/20/20



- For energy climate package targets:
 - Additional strategic directions and measures/instruments are needed
 - Final energy demand is expected to depend more on development policy on climate/energy policy
 - Further measures need to be prepared in:
 - Energy and climate policy;
 - Development policy
 - Cross-sectoral measures (housing policy, fiscal etc)
 - Necessary condition is compliance of short term target (Kyoto, NEEAP; NEC); and consistent implementation of planned measures