

PERSPECTIVES OF POWER-TO-X TECHNOLOGIES IN SWITZERLAND

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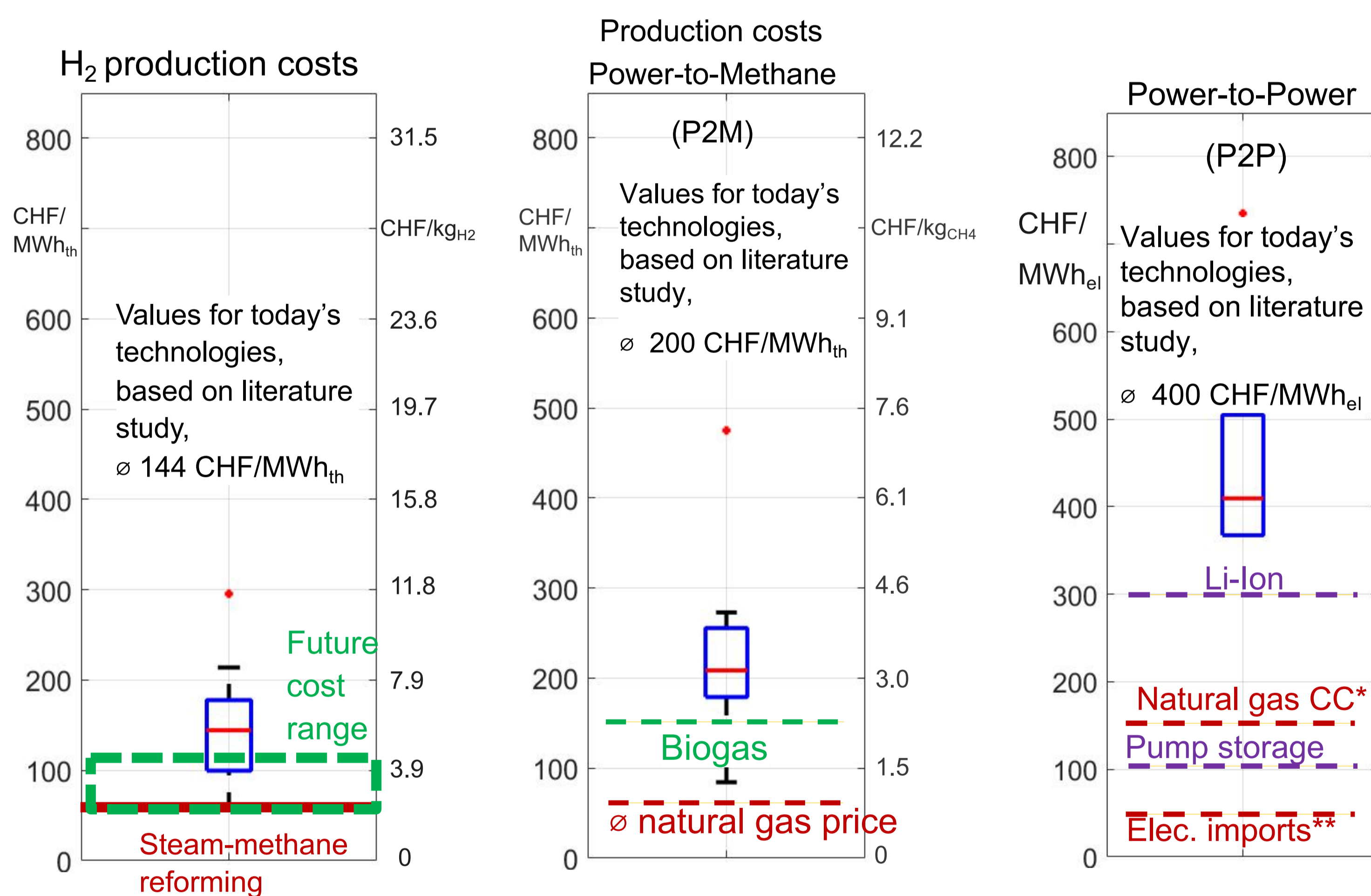
NEW ENERGY LANDSCAPES

- Growing share of intermittent renewable energy, acceleration in future
- Increasing challenges of temporal and spatial grid balancing
- P2X technologies represent future potential solutions for this balancing challenge and for supply of clean fuels

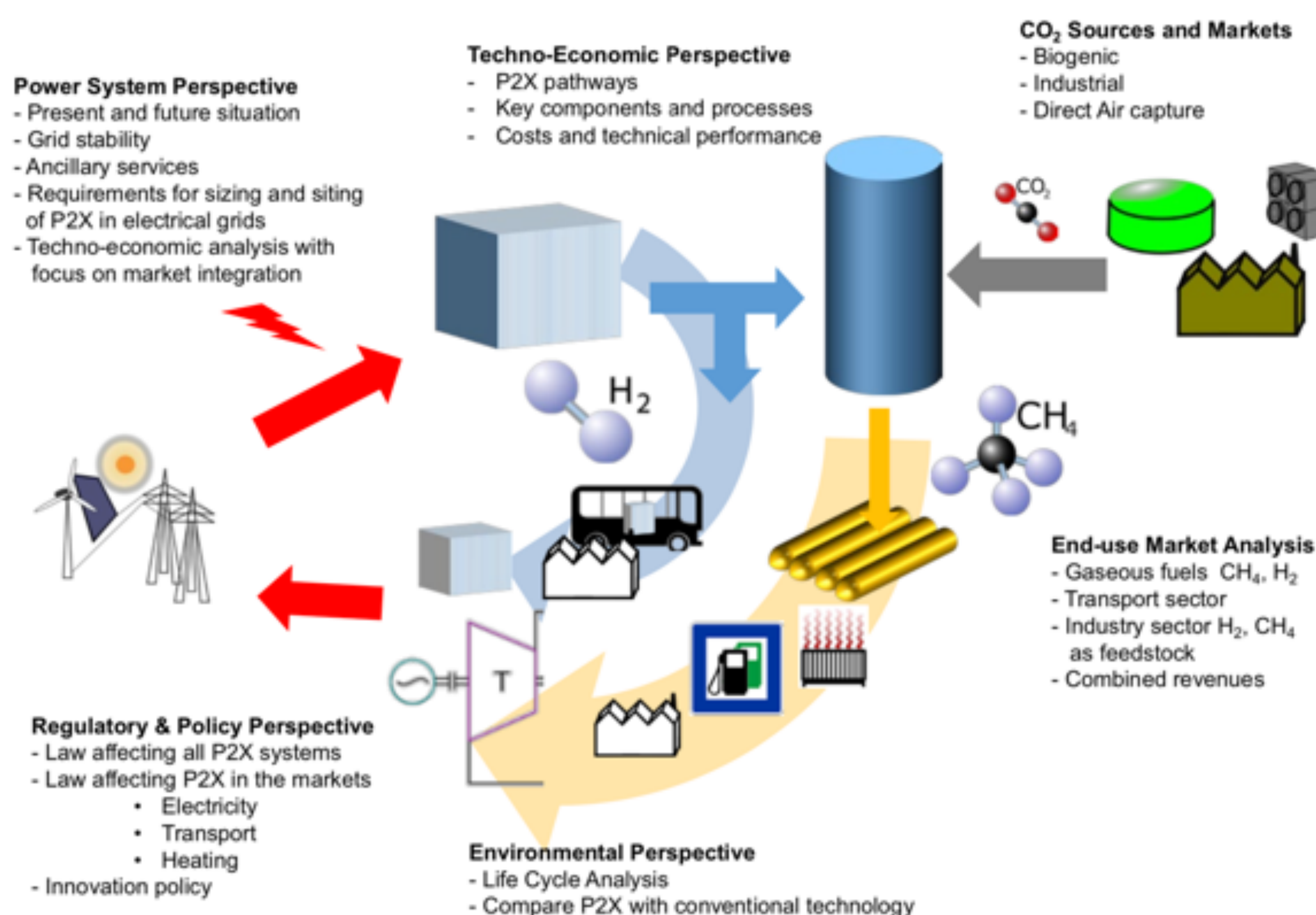
OBJECTIVES

- Collect the major existing P2X knowledge
- Provide a synthesis and evaluation for the Swiss energy market
- Derive a technical, economic and environmental assessment of P2X in the energy system, with a focus on interdependencies on the gas market, the mobility sector and the electricity market

P2X COST EVALUATION



MULTIPLE PERSPECTIVES



KEY RECOMMENDATIONS

- **Ambitious goals for domestic reduction of CO₂ emissions** are required
- **Ambiguities in the regulation framework should be eliminated** acknowledging the benefits of P2X
- **Upscaling of pilot P2X plants** should be supported in order to reach commercial unit sizes
- **Innovation policy should strengthen the domestic market for P2X products** and support learning-by using P2X technologies in comprehensive project setups covering complete P2X value chains
- **Clear rules for accounting for potential environmental benefits** of P2X
- The role of P2X and the optimal use of P2X to achieve long-term energy and climate goals should be deepened in **holistic studies**, with particular attention to **system integration and local aspects**.