

Energy Transition Challenges for the EU and Austria





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Outline

- The Context
 - The Paris Climate Agreement and the EU's New 2030 Climate and Energy Framework
 - the Clean Energy Package
 - #mission 2030 – Austria's Climate and Energy Strategy
- The Integration of Renewables into the Energy System
 - Flexibility - the New Watchword for Power Systems
 - The Role of Storage: The Hydrogen Initiative, Austria's Hydrogen Strategy
 - Green Gas

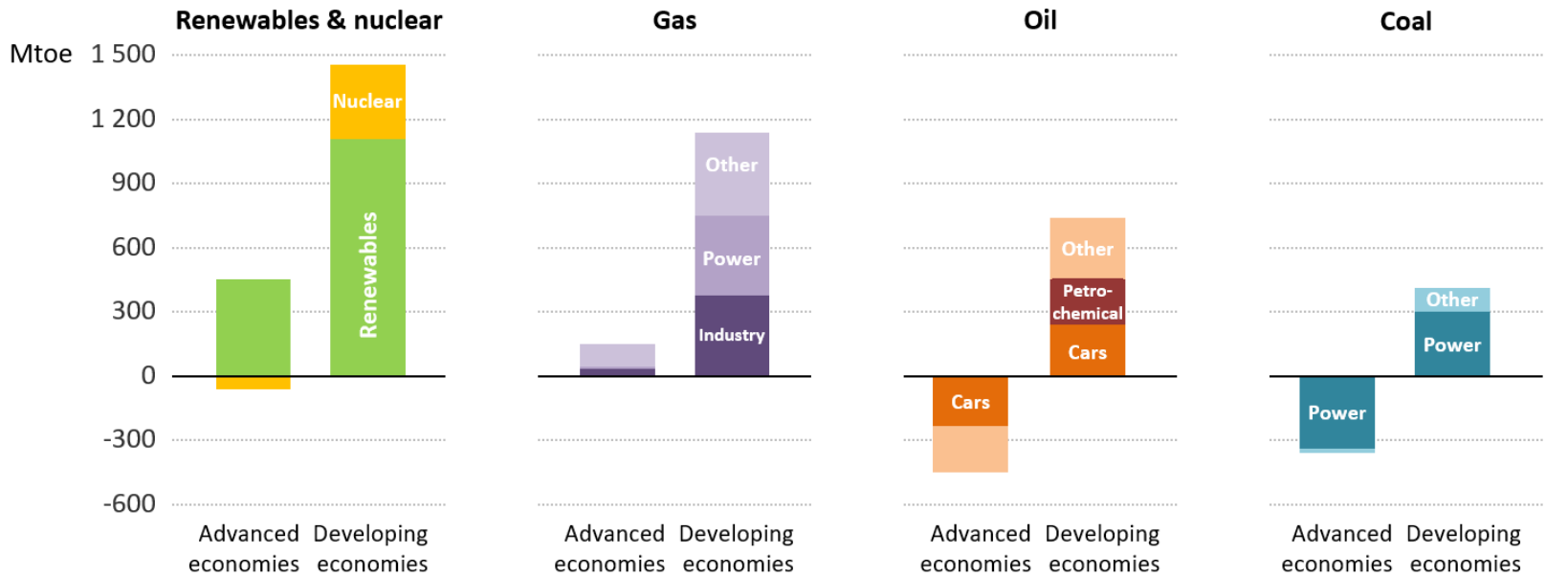
Energy and Climate Targets: EU/AT

	2020		2030	
				
Renewables Share of renewable energy (gross domestic energy consumption)	20%	34% (2017: 33%)	32%	45-50%
Energy Efficiency	20% vs. PRIMES 2020	1050 PJ (2017: 1130 PJ)	32,5% vs. PRIMES 2030	25-30% Primary energy intensity vs. 2015
GHG Emissions Reduction vs. 2005 Nicht-ETS	-10%	-16% (2016: -13%)	-30%	-36%
ETS (European level only)		-21%		-43%

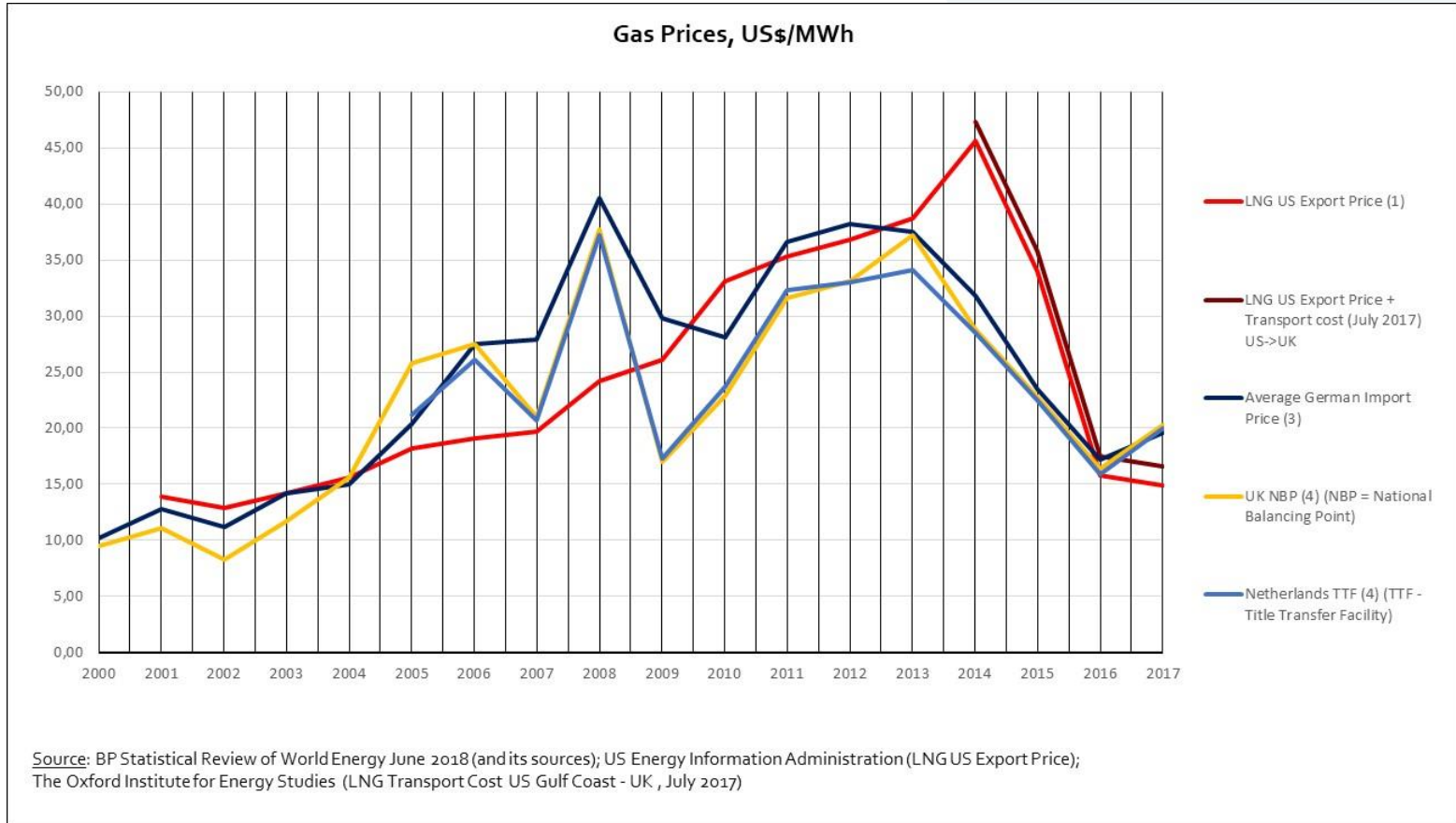
Austrian Presidency of the Council of the EU 2018 - Energy Policy Highlights

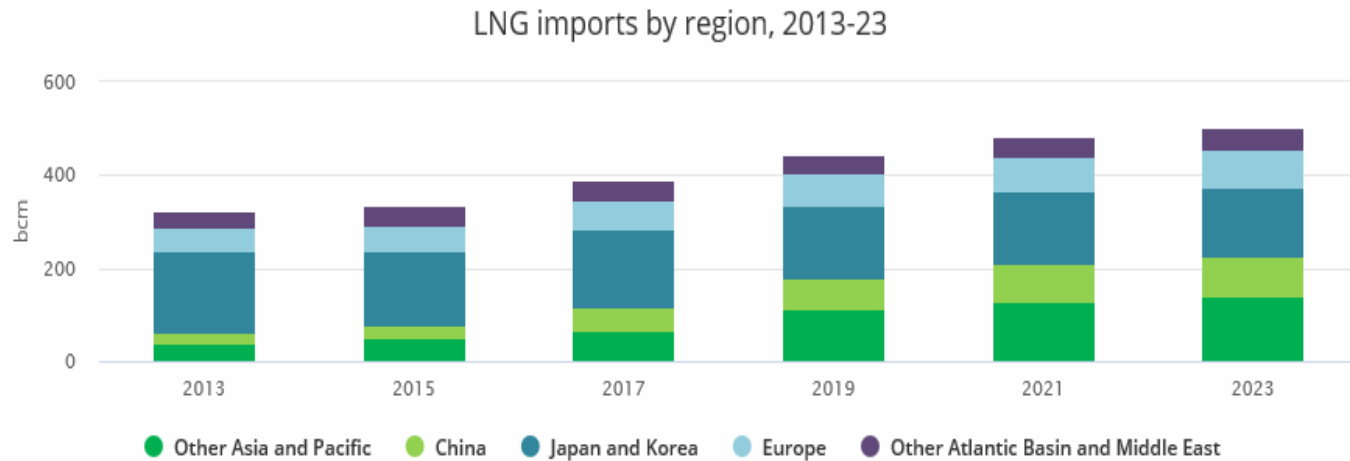
- Coal phase-out until 2025:
 - payments under capacity mechanisms only for generation complying with the Emission Performance Standard of 550 g/kWh (for existing plants alternatively 350 kg/kW)
- up to 15 % of CEF-Energy budget dedicated to Renewables
- The Hydrogen Initiative

Change in global energy demand 2017 – 2040

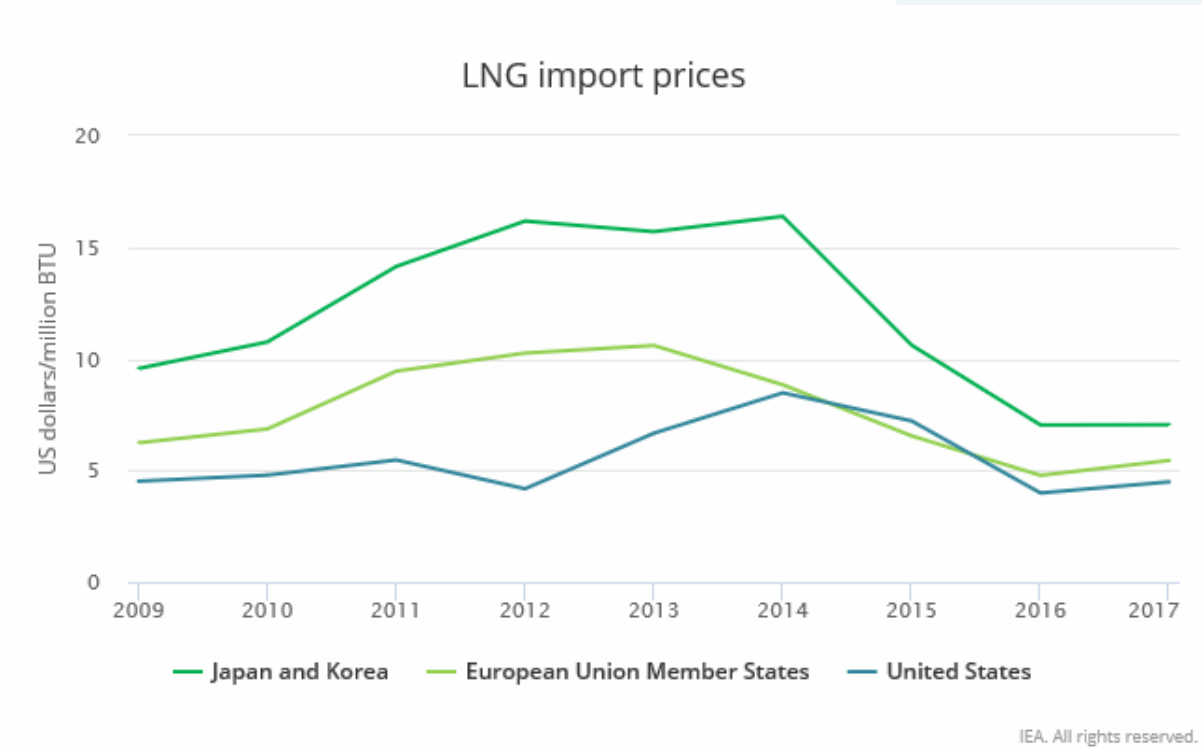


Source: IEA, World Energy Outlook 2018





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Flexibility - the New Watchword for Power Systems

- Higher shares of variable renewables raise flexibility needs.
- main ways to source flexibility to balance power systems:
 - make the power generation fleet and demand more flexible,
 - deploy energy storage,
 - upgrade and improve electricity grids and their operation

„The Hydrogen Initiative“



International Activities for Hydrogen



Hydrogen Report Advisory
April-June 2019



Coordination Kick-Off
April 2019



MS Best Practice
June 2019

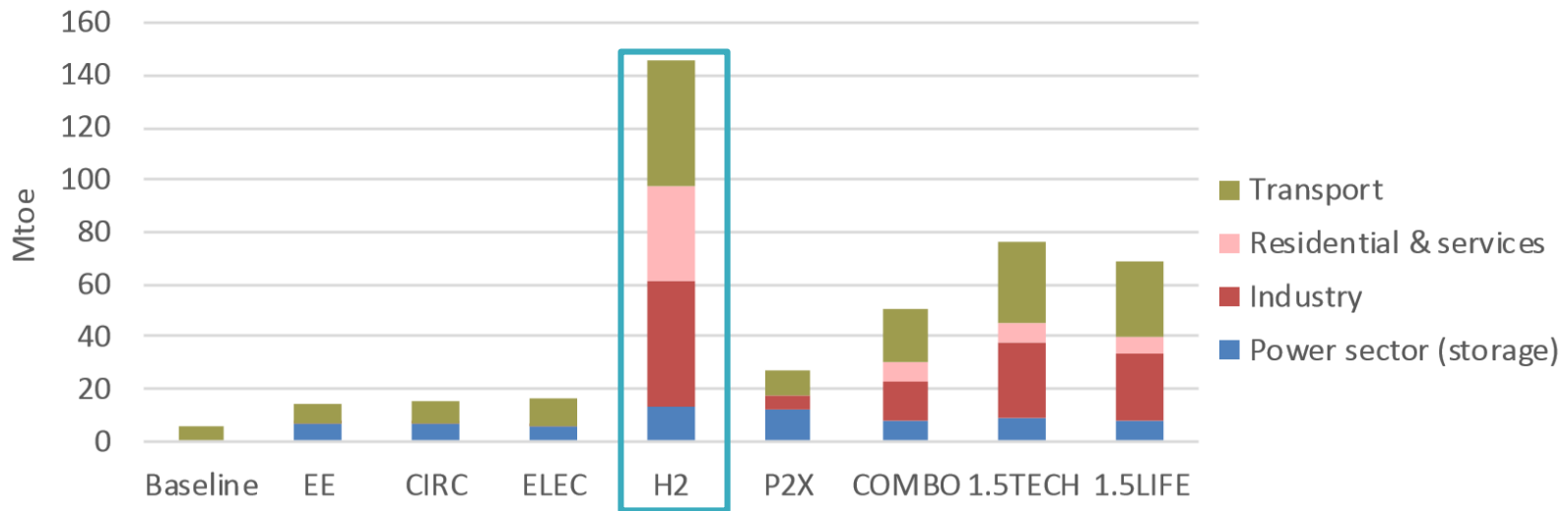


Workshop Input
April/May 2019

Long-Term Strategy 2050 of the European Commission: Consumption of Hydrogen

147 Mtoe = 1 710 TWh = 483 bcm H₂

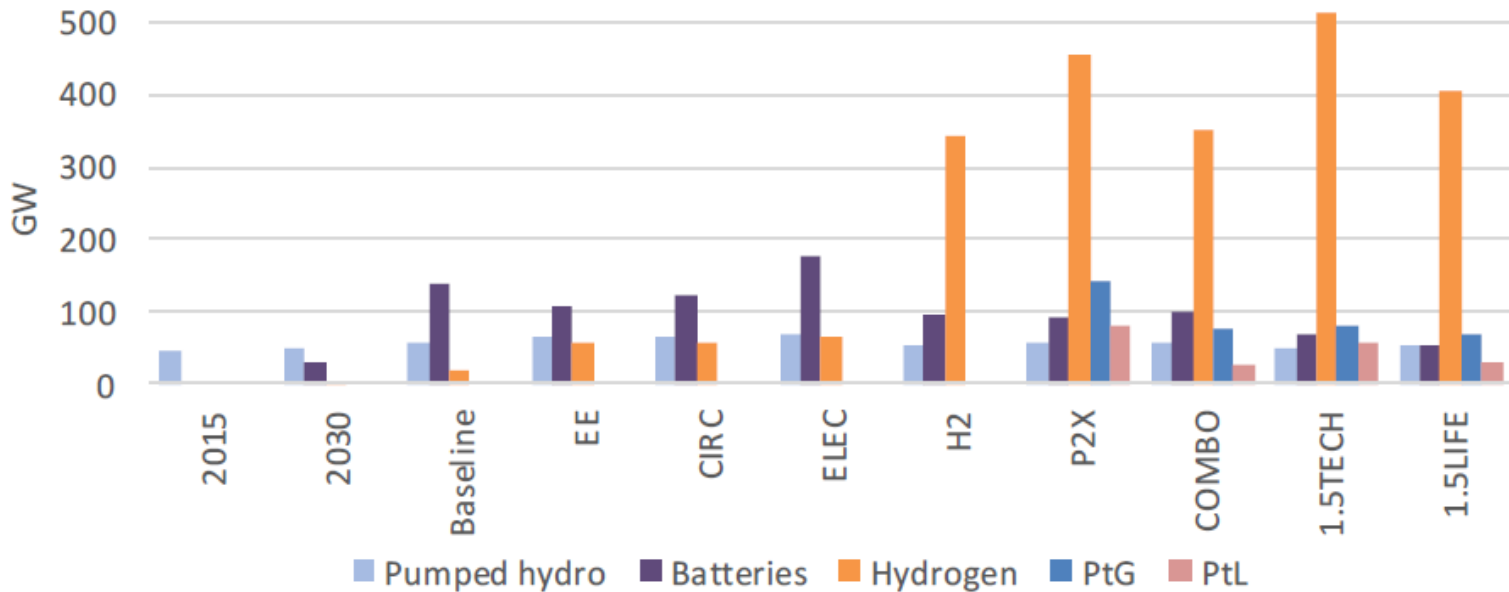
Figure 32: Consumption of hydrogen by sector in 2050



Source: Long-Term Strategy 2050 of the EC, 2018; PRIMES

Long-Term Strategy 2050 of the European Commission: Hydrogen Production Capacities

Figure 27: Electricity storage and new fuel production capacities (2050)



Source: Long-Term Strategy 2050 of the EC, 2018; PRIMES

Discussion Points P2G in AT

Ensuring legal certainty

- Definitions
- System of guarantees of origin (RED II)

Fair levies und network charges

- Avoiding double tariffs
- Superposing network charges
- Grid-supportive behaviour
- Natural Gas Tax Act

Strengthening market players

- Through Renewable Expansion Act
- Role of TSOs and DSOs

Overcoming technical barriers

- H₂-Fitness in the gasgrid
- Quality standards
- Customer billing
- End-user units

Integrated Network Infrastructure Plan



Quelle: TU Wien; AGGM

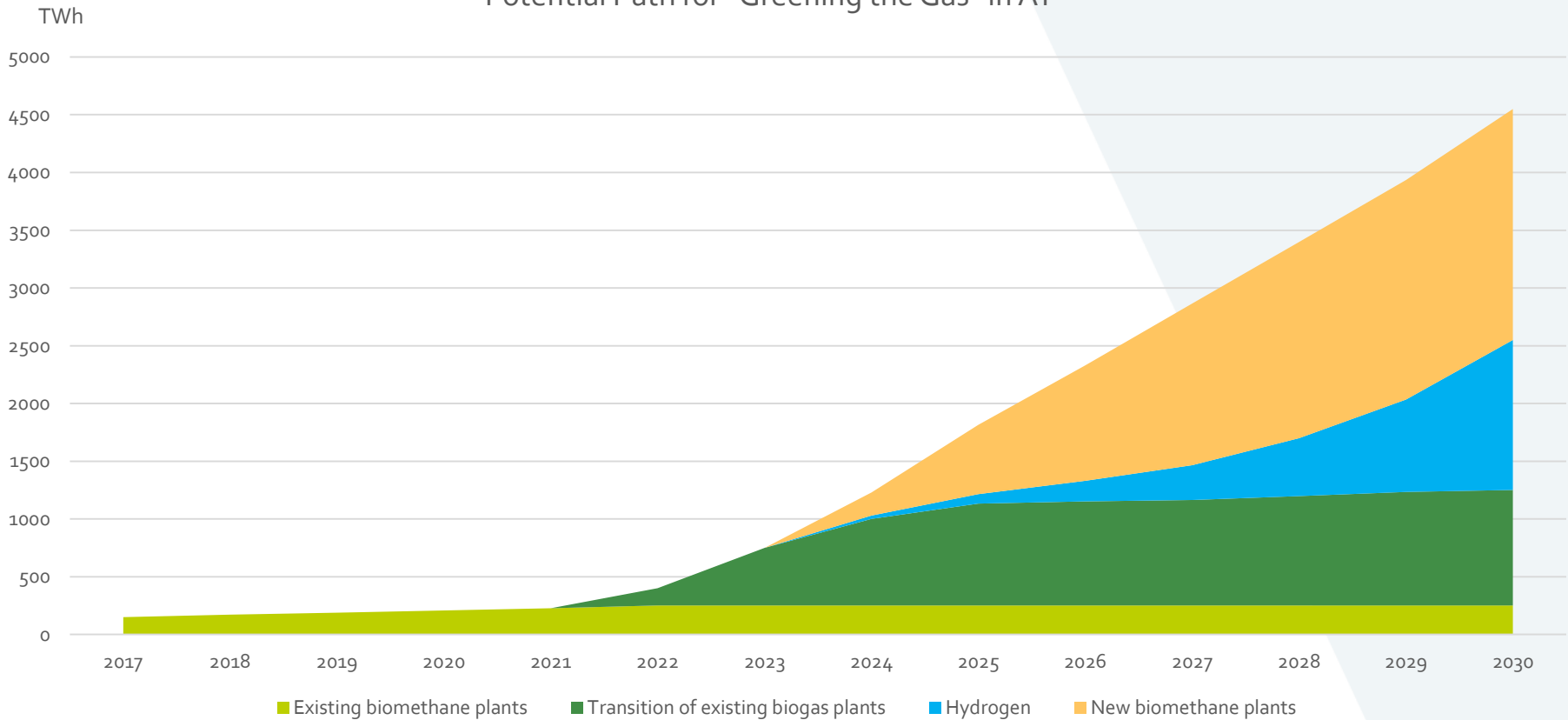
Austrian Hydrogen Strategy

- Kick-off on 20 March 2019
- In cooperation with stakeholders from industry, economy, research and associations
- Input for Renewable Deployment Act and NECP
- Transition of R&D to implementation
- Identification of potentials and measures
- Finalisation until end of 2019



Renewable Gases in AT

Potential Path for "Greening the Gas" in AT



Thank you for your
attention!

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