

PERCEPTION OF INDUSTRIAL SYMBIOSIS AND CARBON MANAGEMENT IN AUSTRIA


IEA IETS Task 21
Carbon Capture & Industrial Symbiosis

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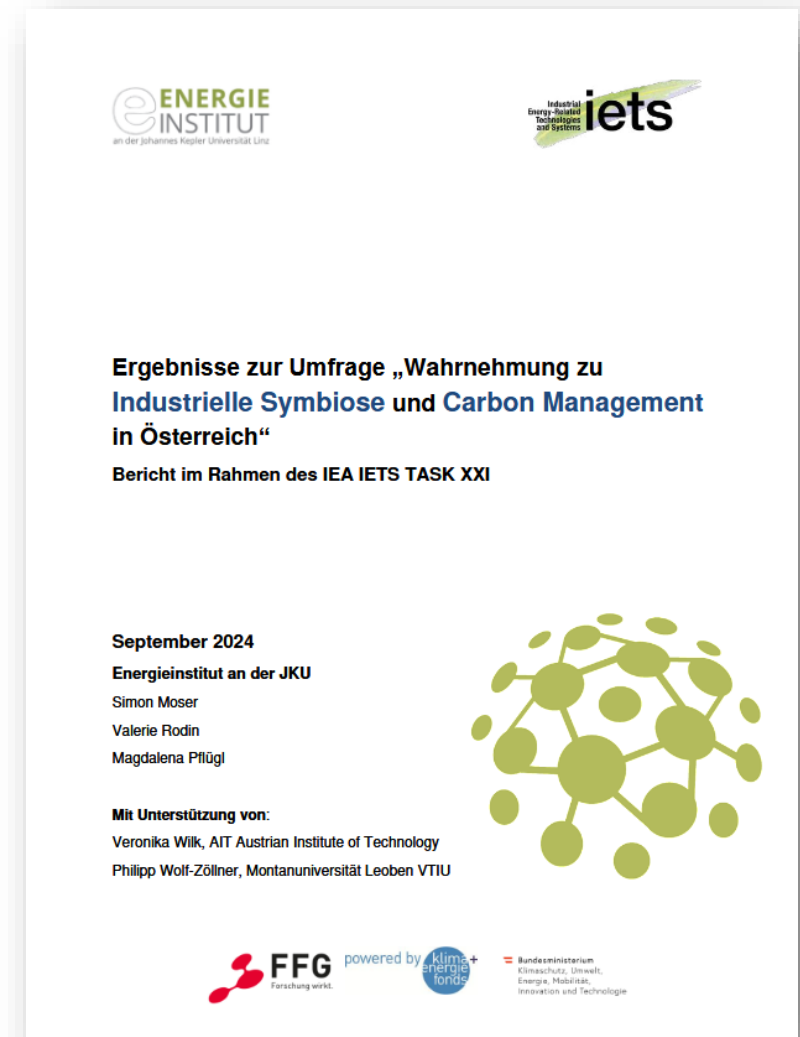
Austria's participation in IEA IETS Task 21 is financed by the federal ministry within the framework of the IEA Research Cooperation programme.

 Federal Ministry
Innovation, Mobility
and Infrastructure
Republic of Austria

Industrial Symbiosis und Carbon Management

Survey in Austria 2024

- The survey was conducted as part of the Austrian participation in IEA IETS Task 21.
<https://iea-industry.org/tasks/decarbonizing-industrial-systems-in-a-circular-economy-framework/>
- The detailed methods and results are available here:
Moser, Rodin, Pflügl (2024): Results of the survey
“Perceptions of Industrial Symbiosis and Carbon Management in Austria”. In German.
<https://energieinstitut-linz.at/wp-content/uploads/2025/02/Umfrage-Industrielle-Symbiose-und-Carbon-Management-in-Oesterreich.pdf>

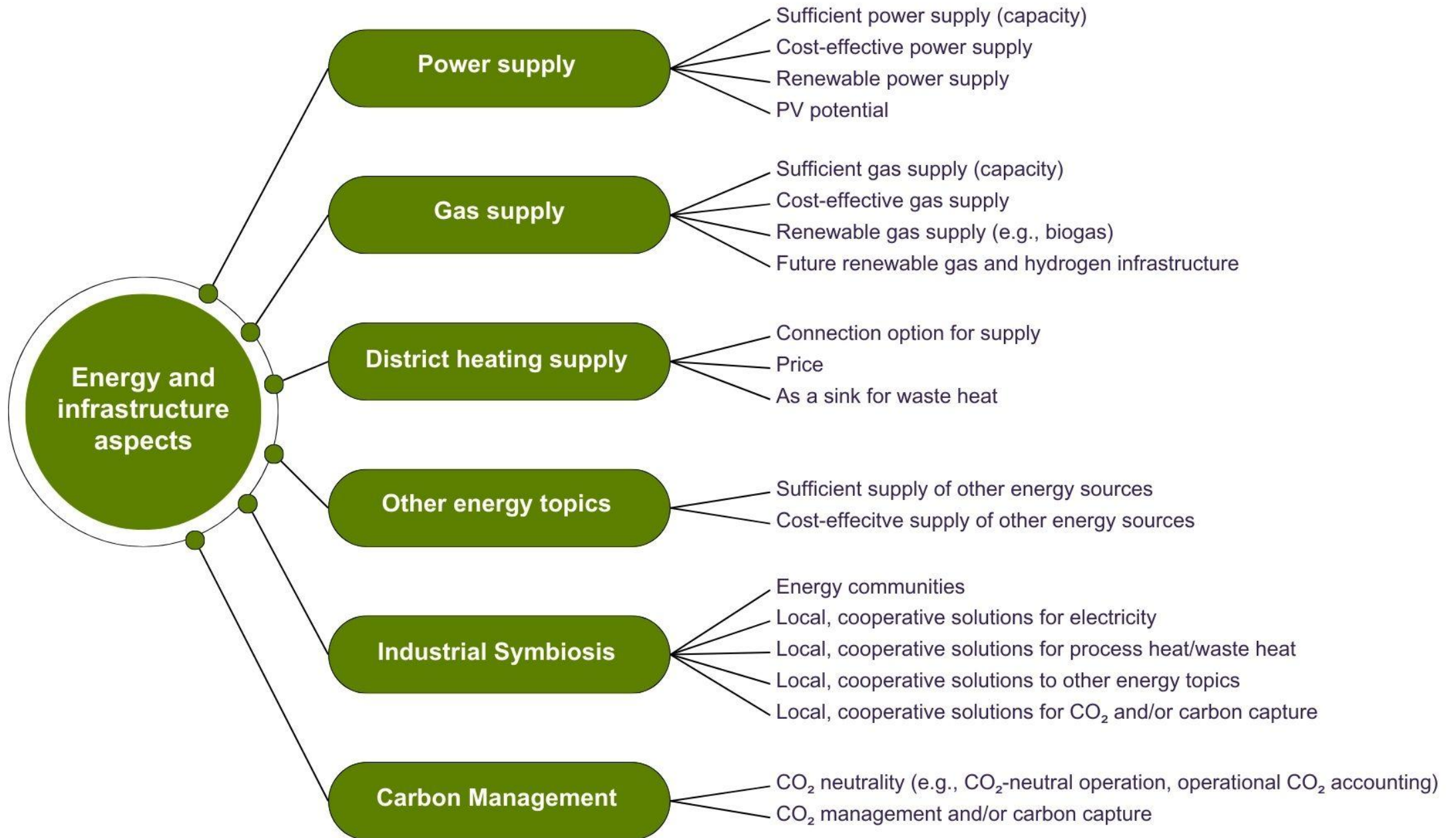


Background: What is “Industrial Symbiosis”?

For authorities, the actual topic is its “facilitation”

- Industrial Symbiosis originates from the circular economy
- Energy cooperation is a part of Industrial Symbiosis
- Industrial Symbiosis:
 - Cooperation of unrelated companies
 - Exchange of material and energy exchange
→ increase efficiency, use less primary energy or materials
 - Proximity of companies (?)
- How to distinguish from normal B2B cooperation?
- Research focus and policy focus:
FACILITATION = How to support the establishment of Industrial Symbiosis

Literature	Ehrenfeld and Gertler, 1997	Chertow, 2000	Jacobsen, 2006	Domenech and Davies, 2011	Lombard and Laybourn, 2012	Chertow and Ehrenfeld, 2012	Leigh and Li, 2015	FISSAC project, 2015-2020	Boix et al., 2017	CEN Workshop Agreement 17354,	Nordregio
Criteria (as mentioned or suggested in the definitions)											
Cooperation of unrelated companies	+	+	+	+	(+)	+	+	+	+	(+)	+
Circular Economy / Industrial Ecology / Holistic Perspective / Culture Change	+			+	+	+	+	+			
Material / Energy exchange	+	+		+		+	+		+	+	+
reduction of virgin raw material / wastes / increase use time				+	+			+		+	+
Alternative sources; use of by-products / wastes			+				+	+		+	+
Process optimization	+		+		+						
Environmental impact reduction				+				+	+		
Joint provision of utilities and services			+							+	+
Exchange of information		+		+						+	
Aim for economic benefit		+			+			+	+		
Proximity of companies		+	+					+			+
Beyond proximity								+			



Industrial Symbiosis und Carbon Management

„Which topics have been mentioned during consulting the companies?“

■ Survey asking

- Chamber of commerce (federal, state)
- Industry association (federal, state)
- Site/location agencies of Austrian states
- **Survey = view of consultants**

■ Survey overview:

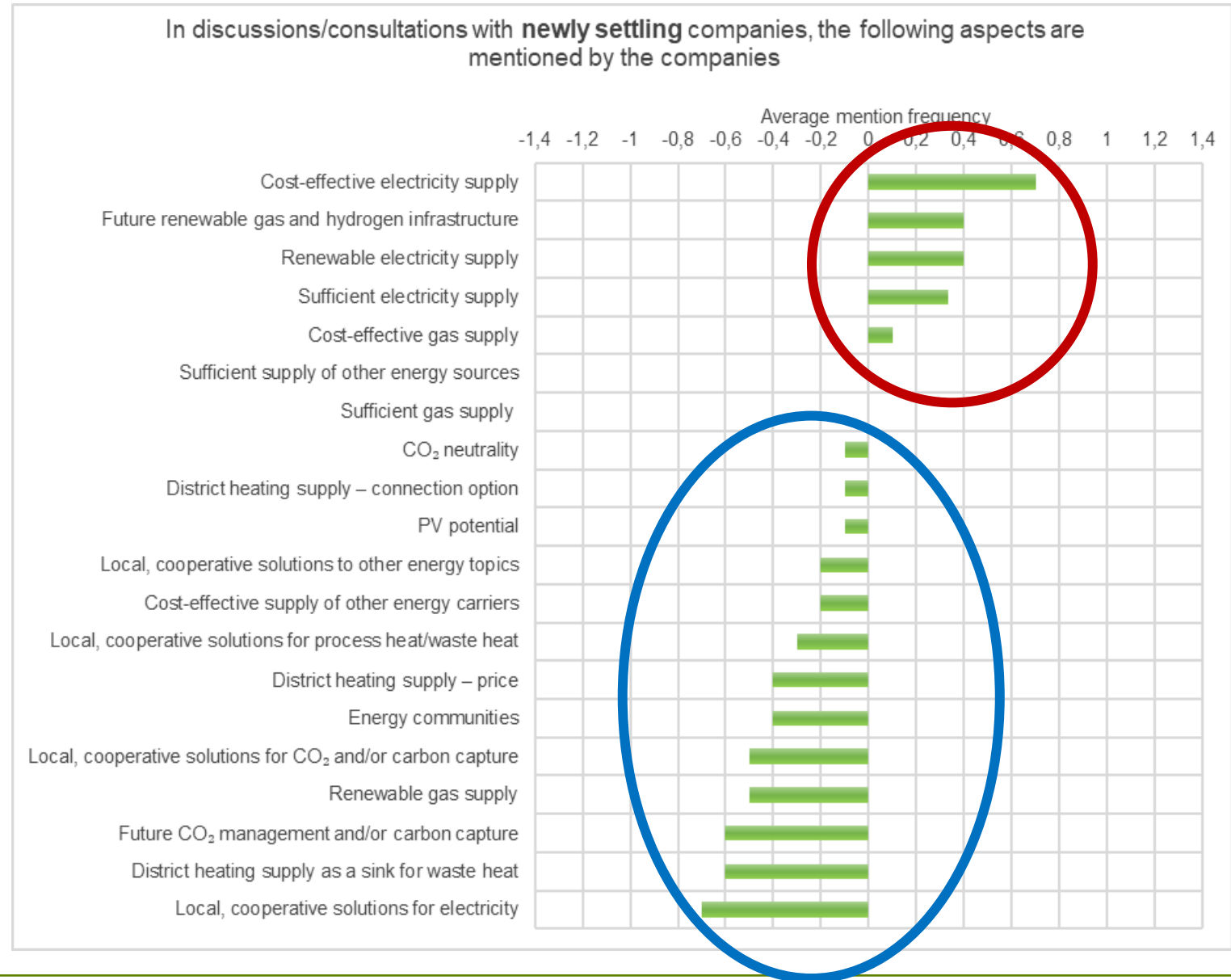
- “Population” n = 30
- Responses n = 10

	New settlements	Established companies
Companies' topics	Area 1	Area 2
Consultants' topics	Area 3	Area 4

New settlements

„Which topics have been mentioned by the companies?“

- Often:
 - Supply
 - Price
 - (Renewables e.g. PV)
- Rarely:
 - Waste heat
 - District heating
 - Energy communities



Established companies

„Which topics have been mentioned by the companies?“

- Often:
 - Supply
 - Price
 - (Renewables e.g. PV)
- Neutral:
 - Energy communities
 - District heating availability
- Rarely:
 - Waste heat
 - CO₂ management



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