



## 16<sup>th</sup> INTERNATIONAL CONFERENCE ON CARBON DIOXIDE UTILIZATION

### Economic potentials of a larger scale CCU deployment: A review and outlook

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As an increasing number of CCU technologies are developed to enter global markets, policy makers gain interest in the potential reciprocal economic effects of their large-scale deployment. However, no reliable economic data is yet available on the multitude of technologies – of which many are still in early development stages – from which resilient quantitative findings can be derived. Consequently, from an economic perspective, it is therefore necessary to investigate qualitative presumptions on the effects of broad implementation of CCU technology.<sup>1</sup> The considerations of this paper are, therefore, made under the assumption of an optimistic perspective of long-term, large-scale deployment of CCU technologies with wide-scale manufacture of chemical materials, building materials and fuels from CO<sub>2</sub>.

In this paper the possible reciprocal economic effects of this large-scale CCU deployment are examined via the central economic fields of production and regional development, foreign trade, competitiveness and cohesion, investment and financing, as well as employment and household budgets. The analysis of expected potentials and risks within relevant studies<sup>2-4</sup> reveals how CCU is expected to impact a developed economy's domestic production, as well as exports and imports. Furthermore, it is examined how the technologies are expected to contribute to the modernization of industries and economic growth. Potential risks however could include detrimental rebound effects caused by increased amounts of products and waste, as well as the mismanagement of public and private investments if path dependencies are not considered and projects are not aligned with future political targets. Furthermore, positive effects are expected in

the area of investment and financing through the founding of businesses associated with CCU. While entrepreneurship is seen as essential factor for an economy's growth and development of jobs, markets and skills, several barriers for new CCU ventures have been pointed out, such as access to institutional investors which is crucial for scaling-up.<sup>5</sup>

The overall economic potentials of CCU repeatedly correspond with the kinds of hope which often rise in connection with environmental technologies. The Sustainable Development Goals (SDGs) passed by the UN in 2016 presume for example that technological progress and innovation will lead to the achievement of more sustainable economic modes and developments, and resource efficiency will play an important role in this regard.<sup>6</sup> Therefore, studying the potential economic contributions of CCU technologies is of uttermost importance for their successful and sustainable future deployment.

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