

### CO2 tax – not in my backyard

**Authors and affiliation: Jacob Ladenburg<sup>a</sup> and Ugur Soytaş<sup>a</sup>**

**a) Technical University of Denmark (DTU), Department of Technology, Management and Economics, Sustainability, Society and Economics Division.**

#### Abstract:

With the international commitments to cut CO<sub>2</sub> emissions by 50-70% by 2030 and 100% by 2050-2070, the search for cost-efficient tools is continuously ongoing. In theory, CO<sub>2</sub> taxes are one of the most efficient and simple tools. However, despite its nice economic properties, CO<sub>2</sub> taxes are not always preferred by the public and can have social inequality impacts. Another issue is that the CO<sub>2</sub> tax instrument can be substituted by other CO<sub>2</sub> reduction interventions, such as increased renewable energy like wind power. Nevertheless, wind power is also controversial, and the local acceptance of new, mainly onshore, wind power projects can be very low. In this paper, we test how these two issues are related. Using data from a national survey with 2,386 respondents, we test how the wind power landscape (number of turbines) where people live relates to the acceptance of CO<sub>2</sub> consumer taxes. Accounting for the many findings of decreasing acceptance of wind turbines with age, we also test if wind turbine landscape and CO<sub>2</sub> consumer tax relations are conditional on age (<51 years vs. >50 years). The average results show no relations. However, conditional on age, older respondents who can see many turbines from the residence are more *positive* towards consumer CO<sub>2</sub> taxes than respondents who see fewer turbines. In contrast, more turbines in the viewshed are *negatively* related to the acceptance of consumer CO<sub>2</sub> taxes among the younger respondents. First of all, our results illustrate the dynamic properties of support for CO<sub>2</sub> taxes. Secondly, our results also denote the complexity of substitution between acceptance of CO<sub>2</sub> consumer taxes and the wind power development across generations.