

STUDY TITLE: Assessment of Spatially-Explicit Social Values Relative to Offshore Wind Energy Areas in the Carolinas

REPORT TITLE: Resident Perceptions of Local Offshore Wind Energy Development: Support Level and Intended Action in Coastal North and South Carolina

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KEY WORDS: offshore wind energy, wind energy areas, North Carolina, South Carolina, support level, opposition, quality of life, perceived impacts, place attachment, proximity affect, action

BRIEF ABSTRACT: Americans generally support wind energy, but opposition to local wind energy development projects is common, and action to oppose projects can hinder planning processes. Therefore, it is important to understand the factors mediating local support or opposition for offshore wind energy development, as well as the drivers of and propensity toward place-protective action. Data were collected in coastal North and South Carolina adjacent to proposed offshore wind development areas. Logistic regression was used to examine factors influencing support level and intended action to support or oppose local efforts. Results indicate residents are more likely to oppose local offshore wind energy development and engage in action the closer they live to the shoreline. Awareness of local offshore wind energy development is also more likely to lead to opposition. Related, residents in the study region who are unsure about the impacts on their quality of life and those who are unaware of local efforts are more likely to support local offshore wind energy development. Support level may change as residents grow more sure of impacts and more aware of efforts. Results also suggest that

¹ The affiliation of the principle investigators may be different from that listed for the project manager.

strong place attachment is likely to precipitate action, especially for individuals who oppose local offshore wind energy development. Finally, residents who have previously engaged in past action are more likely to intend future action related to local offshore wind energy development. The most common forms of past wind action (e.g., signing a petition, contacting a public official) imply that civic engagement and networks of individuals and organizations related to offshore wind energy development are key for mobilizing both support and opposition.

BACKGROUND: Outside of official public engagement forums, preferences about offshore wind energy development generally remain unknown for members of the public, as well as for groups who may not perceive themselves as stakeholders. Failure to gain the perspective of communities regarding potential benefits or impacts is problematic, particularly when latent stakeholders to local projects emerge late in the planning process. This research offers an approach for understanding what is important to communities, and how differing values and perceptions across communities influence local receptivity to proposed development.

OBJECTIVES: The research goal was to document the relevance and importance of local contextual factors, including place attachment, proximity, and perception of impacts, on the possible reception of proposed local offshore wind energy development among residents in affected coastal communities. The objectives were to identify factors predictive of 1) support level and 2) intention to take future action to advance a position.

METHODS: A geographically stratified, random household survey was conducted in 2018 in a pre-defined coastal region of North and South Carolina adjacent to offshore wind development areas. Residents 18 years of age and older were invited to take the survey, which contained questions on place attachment, recreational activities, social value of favorite places, awareness, perceived impact to important quality of life items, support level, past and future action, and demographic and household characteristics. A 33% response rate was achieved with a final sample size of 3,593. Weighted data were analyzed using STATA/SE 15.1 and SPSS V22. Logistic regression was used to test hypotheses related to the conceptual model. Spatial data were analyzed and visualized using ArcMap v10.5.1 and ArcGIS Pro.

RESULTS: Modelling suggests that household distance to the shoreline, awareness, certainty of impacts, importance of electricity costs, and importance of marine mammals and sea turtle habitat are predictive of support level. Place attachment is not predictive of support level. Future intended action for local offshore wind energy development is predicted by household distance to the shoreline, place attachment, and past action.

CONCLUSIONS: This research confirms the importance of local context when planning offshore wind energy development projects. Residents who are more strongly attached to the Carolina coast are more likely to intend action to advance their position, whether support or opposition, on local offshore wind energy development. However, strong place attachment is more likely to lead opponents to intend action, rather than supporters. Further, opponents are more likely to intend future action, regardless of having engaged in past action of some kind. Results also indicate that low awareness and uncertainty of impacts from local offshore wind energy development are predictive of support. Conversely, with heightened awareness of local efforts, opposition is more likely. Residents closer to the shoreline were more likely to oppose local offshore wind energy development than residents living further inland, although daytime views of the ocean does not predict support level. Importance of marine mammal and

sea turtle habitat drives opposition, and electricity affordability drives support of local offshore wind energy development.

STUDY PRODUCT(S):

1. BOEM study report: Goedeke, Theresa L, Sarah Ball Gonyo, Chloe S Fleming, Jarrod L Loerzel, Amy Freitag, and Chris Ellis. 2019. Resident Perceptions of Local Offshore Wind Energy Development: Support Level and Intended Action in Coastal North and South Carolina. Sterling (VA): US Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM 2019-054. 100 p.
2. Tabular and spatial data: Copies of digital data are archived in National Centers for Environmental Information.

MAPS SHOWING AREA OF STUDY (Figures 2 and 5 of report OCS Study BOEM 2019-054):

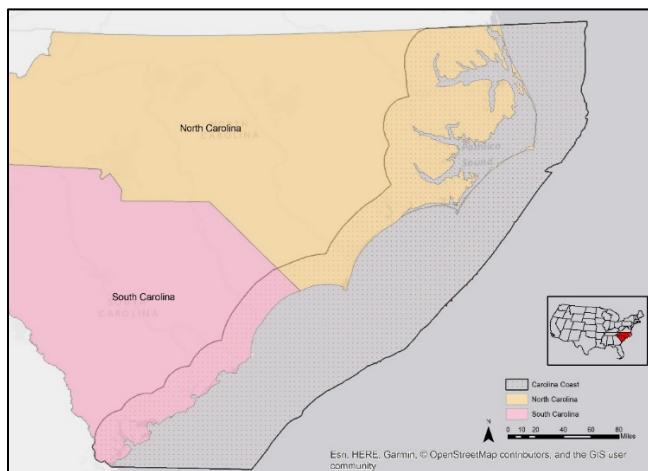


Figure 2: Study region, termed the Carolina coast

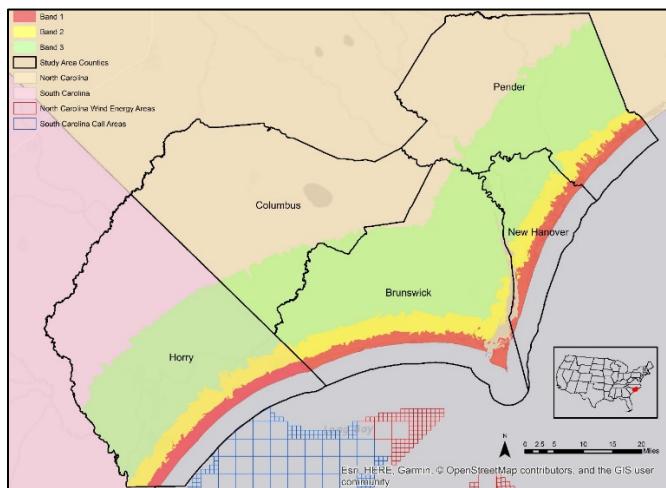


Figure 5: Sampling geography