

DO VIEWS OF OFFSHORE WIND ENERGY DETRACT? A HEDONIC PRICE ANALYSIS OF THE BLOCK ISLAND WIND FARM IN RHODE ISLAND

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Abstract

Social concern and disapproval of offshore wind by coastal communities causes delays and costs to offshore wind development. One concern is property value impacts stemming from a loss of pristine ocean views. We evaluate this concern using the Block Island Wind Farm (BIWF), the first of its kind in the United States. While the BIWF has fewer turbines than currently proposed offshore wind developments, it is situated about 26 kilometers [16 miles] from the Rhode Island mainland, which is a policy relevant distance, given that proposed US developments tend to be 21 to 32 kilometers from coastlines. Using properties from the mainland, we estimate difference-in-differences hedonic valuation models with treatment defined by views of BIWF. Across many specifications and samples, we find no evidence of negative impacts to property values. Coefficient estimates are both negative and positive, but none are statistically distinguishable from zero. We additionally estimate hedonic models using properties on Block Island, which is only 4.8 kilometers from the BIWF, meaning the BIWF is more of a visually dominant feature there as compared to the mainland. These models similarly find insignificant effects of views. In sum, our findings suggest that the viewshed impacts of the BIWF were minimal.

Keywords: Offshore wind energy, hedonic model, valuation, property values, Block Island, LiDAR, Digital Surface Model
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1 Introduction

Fossil fuels are still the dominant source of energy production. In 2020, fossil fuel consumption represented approximately 80% of energy use in the US (EIA). Burning fossil fuels generates pollution, both criteria pollutants that lead to adverse health impacts and carbon emissions that cause climate change. To address this issue, the US has increased the use of renewables, which are clean and sustainable. Recently, the development of wind energy has increased significantly. According to the Department of Energy (DOE), cumulative US wind capacity increased from 40.35 GW in 2010 to 121.99 GW in 2020. While virtually all this increase has been onshore, in the future offshore wind farms (OSWFs) will likely be a large component of the portfolio (NREL).

However, concerns persist about OSWFs that can inhibit development. There are ecological concerns related to whales, birds, and marine habitats, and anthropocentric concerns about spoiled ocean views and impacts to tourism. In a 2021 hearing before the Maryland Public Service Commission regarding awarding offshore renewable energy certificates for proposed OSWFs (docket 9666), the mayor of Ocean City, Maryland, Richard Meehan, submitted written testimony that

“Ocean City’s concern is that if the wind turbines are built within Ocean City’s viewshed, this will have a significantly damaging effect on Ocean City’s tourism and economy... Ocean City prides itself on its pristine views, which will no longer be pristine if the turbines are visible from shore... If there are more turbines, some as close as 13 miles from shore, this will have a negative effect on property value. If the

appraised value of properties decrease, this will adversely affect the tax revenue collected by Ocean City.”¹

While the claims about property values were unsubstantiated in the testimony, they are very real concerns for Ocean City and many other coastal communities.

The objective of this article is to evaluate concerns regarding property value impacts of OSWFs using the Block Island Wind Farm (BIWF), the first OSWF in the United States. Completed in August 2016, the BIWF consists of five six-megawatt turbines, each with a hub height of 100 m and a blade length of 75 m.² The BIWF is located about 4.8 km [3 miles] off the southeast coast of Block Island, Rhode Island, and the turbines are arrayed perpendicular to the angle of viewing from Block Island and spaced about 835 m apart (see Figure 1). The BIWF is about 26 km [16 miles] from the Rhode Island mainland. While currently proposed OSWF developments will have more turbines than BIWF, they tend to be sited 21 to 32 km from coastlines (BOEM), which makes the effect of BIWF on mainland housing prices a valuable data point to understand impacts of future developments.

We apply the hedonic valuation method and focus on property-specific turbine view as the key feature of BIWF that could impact property values. Any change in property value reflects people’s preferences for turbine views improving or contaminating their ocean views. We construct a dataset that contains 11,058 mainland transactions over the years of 2005 to 2020 for properties that are within 3 km of the coast. We use LiDAR Digital Surface Model data to assess views of the turbines as well as views of water. We estimate cross-sectional and repeat sales difference-in-differences models using turbine view as treatment. In addition to water views, we also control for proximity to the coast and property characteristics and include a rich set of

¹ https://webapp.psc.state.md.us/newIntranet/casenum/CaseAction_new.cfm?CaseNumber=9666

² The below water foundations and above water platforms were completed during September and October 2015 (Shuman 2015). The platforms heights were 21 m above the water, and thus would not be visible from the mainland.

temporal and spatial fixed effects. Identification is buoyed by micro-variation in viewshed. Due to the presence of trees and buildings, a house with a view of the turbines could be next door to a house without views.

The results suggest that property values are not impacted by turbine views. The treatment effect coefficients from the primary difference-in-differences models range from -0.4% to 12.4% change in value for properties with a turbine view relative to those without. However, all coefficients are not statistically different from zero, implying no statistical impact. We perform many robustness checks that limit the distance from the coast needed to be in the sample and even include only properties that have a water view, as well as including only transactions 2010-2020. In all, the results are qualitatively identical to the main findings with both positive and negative point estimates, none of which are statistically distinguishable from zero. These findings suggests that the BIWF has had no adverse impact on mainland housing prices. As for water view and proximity to the coast, most models display positive and significant estimates, confirming intuition that houses that have a water view or that are adjacent to a waterbody tend to have higher value.

We also explore whether views of the BIWF affect property values on Block Island itself. These models are not our main focus both because data are limited and the results are less relevant for future OSWFs due to the close proximity. Despite this, they are still a useful complement. Intuitively, if there are negative impacts of turbine views, they would be stronger on Block Island than on the mainland. However, similar to our main results, we find no statistical impact of the BIWF viewshed on Block Island property values.

Our study contributes to two literatures. First, we expand the hedonic valuation of renewable energy literature. To date, there is only one article examining the property value

impacts of OSWFs. Jensen et al. (2018) examine price effects of two, large OSWFs on both primary and secondary residences in Denmark. They similarly find that views of the turbines do not have a statistical impact on either type of property. Many articles have examined property value impacts of onshore wind turbines with mixed results, with some focusing on proximity and others incorporating viewshed (see Parsons and Heintzelman (2022) for a review). Within the United States, while Heintzelman and Tuttle (2012) find some evidence of negative impacts, studies with larger numbers of observations close to turbines find no significant impact on property prices (Lang et al. 2014, Hoen et al. 2015, Hoen and Atkinson-Palombo 2016). In contrast, studies in European countries consistently find that wind turbines have a significant negative impact on nearby properties, though the magnitude of the effect differs by region (Gibbons 2015, Sunak and Madlener 2016, Dröes and Koster 2021, Jarvis 2021). Using Canadian data, Vyn (2018) finds heterogeneous impacts that are dependent on community acceptance. More recently, several papers have applied hedonic valuation to assess disamenities associated with proximity to utility-scale solar arrays. Abashidze (2019) and Gaur and Lang (2020) find negative impacts working in North Carolina and New England, USA, respectively. However, Jarvis (2021) finds no statistical impact in England.

This paper also contributes to the literature that examines offshore wind acceptance. Firestone et al. (2018) study perceptions of permanent residents on Block Island and mainland Rhode Island both before and after construction and find average support increases for both groups following construction. Other research tends to focus on tourists and their stated willingness to visit a location with turbines in view, often varying distance from shore. In general, results suggest large disamenities when OSWFs are near shore, but the effects decrease with distance, eventually becoming zero or even positive (Landry et al. 2012, Lutzeyer et al.

2018, Parsons et al. 2020). Trandafir et al. (2020) examine stated recreation preferences of Block Island tourists. On average, respondents are indifferent to activities with and without turbines in view, but those who know about or have seen the BIWF are more likely to choose the with turbine option. The sole revealed preference research in this vein is Carr-Harris and Lang (2019), who analyze the short-term vacation rental market and find increases in bookings and revenue for Block Island properties following the construction of the BIWF relative to other New England tourist destinations. We contribute to this area of research by offering another revealed preference study and focusing on property owners instead of tourists.

2 Data

2.1 Housing transactions

We use ZTRAX housing transaction data from Zillow (<http://www.zillow.com/data>). The dataset includes sales prices, street addresses, geographic coordinates, Census divisions, transaction dates, and property characteristics (bedrooms, bathrooms, etc.). Prices are adjusted for inflation and brought to quarter 3, 2020 levels using RI quarterly HPI (Federal Housing Finance Agency). Figure 1 displays the study area: the southern coastal area (Westerly, Charlestown, South Kingstown, and Narragansett) of Rhode Island.

We excluded transactions with sales prices below \$100,000, excluded condo transactions, limited the geographic scope to properties within 3km of the coast, and limited the temporal scope to transactions from 2005 to 2020. We also exclude transactions that occur

before a renovation was done.³ The final dataset used for regression includes 11,058 transactions.

2.2 GIS

All GIS analyses were conducted using ArcGIS Pro 2.8 including the creation of the Digital Surface Model (DSM) raster, the calculation of the distances to the coast and the nearest turbine, and viewshed analyses including turbine view and water view.

The geospatial data, including RI boundary, LAS data, and coastal water area were acquired from State Boundary (1997), 2011 Statewide LiDAR - UTM (LAS), and Coastal Waters in the Rhode Island Geographic Information System (RIGIS). We observed Zillow geographic coordinates to be inaccurate based on overlay with satellite imagery. Instead, we geocoded properties using Google Sheets to create point features for all sample properties, and confirmed that these were accurate. BIWF turbine coordinates were obtained from Waterway Guide, and we used these to create a second point feature shapefile. We calculated distance to the coast and distance to the nearest turbine for all sample properties.

2.3 LiDAR Digital Surface Model

LiDAR (light detection and ranging) is a popular remote sensing method used for measuring the exact height of an object. A LiDAR system measures the time it takes for emitted light to travel to an object and back. That time is used to calculate distance traveled, and then convert the distance to elevation. LiDAR can be used to create both Digital Elevation Models (DEM) and Digital Surface Models (DSM). DEM only measure topography of the Earth's

³ The data include whether a renovation was done and, if so, in which year. Because the property characteristics are for the current time only, including transactions pre-renovation would assign incorrect property characteristics to a sale and possibly bias results.

surface, and viewshed analysis using DEM will account for hills, valleys, and curvature of the Earth. In contrast, DSM additionally measures objects like trees and buildings, and thus will better model actual visibility by accounting for these obstructions.

The LiDAR data (RIGIS) were collected in 2011 during leaf-off conditions at a 1-meter or better nominal point spacing (1m GSD) for approximately 1,074 square miles of Rhode Island. We used the LAS files, which contain Lidar point clouds to create the (Digital Surface Model) DSM raster for view analysis. The DSM was created by using the first returned pulses (first returns), which are associated with the highest feature in the landscape, like a treetop or the top of a building. The DSM represents the elevations of the tops of features. We used the linear interpolation method to fill data gaps, and the pixel size was 1 meter. We used a geodesic viewshed tool to conduct viewshed analysis. This tool generates the raster surface locations visible to a set of observer features. For the turbine view analysis, we used turbine points as the observers, and the houses are the points being observed because line-of-sight views are symmetric.⁴ The turbine height we used is 100 meters, which is the hub height (General Electric 2021). To assess properties' views of the water, we created many observer points in the ocean, bay, and coastal salt ponds, and similarly determined whether individual properties were visible from any of the water points.⁵ In our hedonic model, we distinguish between ocean views and pond views.

We set turbine view and water view output raster to have a pixel size of two meters. This improves processing efficiency and is sufficient for property analysis. As we did not have a GIS layer of house footprint, instead only a single point, we created 5-meter buffers around all

⁴ If the viewshed analysis was done the opposite, more intuitive way, the results would be identical, but the processing time would take much longer.

⁵ The ocean view points are 2 km from the coast and spaced about 3 km apart. See Figure A1 in the appendix for a map of all water view points.

housing points, and then overlaid those buffers with the viewshed rasters to determine property specific views of turbines and water.⁶ For turbine views, we create a dummy variable equal to one if any pixel in the 5-meter buffer can see any of the turbines (specifically, the hubs). For ocean view and pond view, we create count variables that equal the number of ocean and pond points that can be seen in the 5-meter buffer. This count approach distinguishes between properties with a lot of water view versus just a little.

Figure 2 illustrates our findings for turbine viewshed for a small area and communicates an important aspect of our identification strategy. Due to micro-variations in tree cover, buildings, and elevation, houses in close proximity can still have different views of the BIWF. Hence, we can control for spatial unobservable variables without capturing all of the variation in turbine views.

Our LiDAR DSM approach to viewshed is an improvement over other ways to get objective measurement over a large area. In previous studies, some researchers simply used distance as the measurement of the impact of wind turbines and conducted no viewshed analysis (Heintzelman and Tuttle 2012, Hoen et al. 2015, Hoen and Atkinson-Palombo 2016, Vyn 2018, Dröes and Koster 2021). In studies including turbine view as a measurement of the impact, viewshed calculation can be classified into three main categories: field visits for subjective assessment (e.g., Hoen et al. 2011, Lang et al., 2014), Digital Elevation Model (DEM) (e.g., Gibbons 2015, Jarvis 2021), and DSM (e.g., Sunak and Madlener 2016).⁷ Field visits are only feasible with a small sample size and could be constrained by inaccessible properties. DEM only measures the elevation of bare earth without above-ground features, like trees and buildings, and hence is less accurate.

⁶ A 5-meter buffer was chosen because these would likely cover most of a typical house without including surrounding trees.

⁷ Jensen et al. (2018) focus on view as their key independent variable, but do not discuss how they calculated it.

2.4 Summary statistics

Table 1 presents summary statistics for our sample properties. The average sales price for the sample is \$560,160 in 2020 dollars. Average structural characteristics are 3,590 square feet of living space, 3.11 bedrooms, and 2.37 bathrooms. The average distance to a coastal waterbody is 0.81 km. The average number of visible ocean points is 0.41 (with a 95th percentile of 3) and the average number of visible pond points is 0.06. The average distance to a wind turbine is 34 km (21 miles). The range of distances to the nearest turbine is 27 to 44 km (17 to 27 miles). Proposed offshore wind developments are typically in the range of 21 to 32 km offshore. For example, Revolution Wind is proposed to be 24 km (15 miles) offshore of Massachusetts, Skipjack is proposed to be 31 km (19 miles) offshore of Delaware, and South Fork Wind is proposed to be 56 km (35 miles) offshore of Long Island (though closer to Rhode Island and Massachusetts).

Our key treatment assignment variable is Turbinview. Our analysis indicates that about 15% of properties have a turbine view. Treatment occurs in August 2016, when the above water construction occurs, and 30% of transactions occur after that time. About 5% of properties transact in August 2016 or later and have turbine views. This set of properties will provide key identifying variation in our difference-in-differences model that we discuss next.

3 Methods

We develop a difference-in-differences (DD) hedonic model to examine the impact of turbine view on property values. The basic identification strategy is to compare properties with an eventual view of the turbine to those without from before the view was realized to after. The DD model identifies the treatment effect from differences in trends instead of differences in levels, which mitigates several concerns stemming from differences between properties with turbine views and those without. However, we develop a rich set of control variables to account for those potential differences. Importantly, we include ocean view, pond view, and coastal proximity in our model because these variable are extremely likely to be correlated with both turbine view and price. Our model is specified as follows:

$$(1) \quad \ln(\text{price}_{imt}) = \beta_1 \text{turbineview}_i + \beta_2 \text{post}_{mt} + \beta_3 \text{post_turbineview}_{imt} \\ + \beta_4 \text{oceanview}_i + \beta_5 \text{pondview}_i + \mathbf{X}_i \boldsymbol{\beta}_6 + \pi_m + \gamma_t + \varepsilon_{it}$$

$\ln(\text{price}_{imt})$ is the natural log of sales price of property i that transacts in month m and year t . turbineview_i is a dummy variable equal to one if the property has a turbine view once the turbines are built. post_{mt} is a dummy variable equal to one if the transaction occurs in August 2016 or after. $\text{post_turbineview}_{imt}$ is the interaction of turbineview_i and post_{mt} and hence equals one if the property has a turbine view and the transaction occurs in August 2016 or after. β_3 is the key DD coefficient of interest. If $\beta_3 < 0$, this would imply that views of the BIWF reduce property value. oceanview_i and pondview_i are integer values equal to the number of ocean and pond points that can be seen from a property. \mathbf{X}_i is a set of property-specific, time-invariant control variables, including structural characteristics (e.g., bedrooms and bathrooms), and a set of dummy variables defined by distance to the coast (0-0.1 km, 0.1-0.25 km, 0.25-0.5 km, and 0.5-1 km), Lastly, π_m are month fixed effects and γ_t are year fixed effects to control for common price fluctuations in the housing market.

We estimate three versions of this model. First, as it is described above. Second, we additionally include block group fixed effects to control for unobserved, spatially delineated price determinants. Third, we estimate a repeat sales model that includes property fixed effects, which captures all observed and unobserved property and location characteristics. The second and third model are our preferred specifications due to their ability to deal with unobservables.

3.1 Assumptions

The key assumption for DD models is the parallel trends assumption, which means that the trends between treatment and control properties would be the same in the absence of treatment. This is of course untestable because treatment does occur. However, we can examine price trends in the pre-treatment period (pre-August 2016) to assess if trends are similar. Figure 3 plots average price trends for properties that eventually have a view of the turbines and properties that never have a view of the turbines. Price trends are quite similar before construction of the BIWF suggesting that the parallel trends assumption is reasonable and properties without a view do serve as a good counterfactual for properties with a view. The figure also indicates that price trends are similar after construction too, suggesting that views of BIWF had little impact on prices. We explore price impacts more rigorously in the next section.

A second assumption we make is that expectations of views of BIWF are not anticipated and are not capitalized into housing prices prior to August 2016. Prior research has shown that expectations of future events do affect housing prices (e.g., Boslett et al. 2016), and some hedonic studies of wind turbines do model a post-siting-decision pre-construction time period to assess if there is an anticipation effect (Lang et al. 2014, Hoen and Atkinson-Palombo 2016). While the BIWF was known about well in advance, and as mentioned in the introduction the

platforms were completed in October 2015, our intuition is that the specific viewshed on the mainland was not known until the towers and blades were constructed. Our LiDAR DSM analysis reveals substantial within-block group heterogeneity in views. Thus, we are assuming that no household forms expectations about the specific views of the turbines that they will or will not have. Importantly, however, as we observe in Figure 3, at no time pre-treatment is there a discernable difference in the trends, which suggests no anticipatory treatment effect.

Lastly, we assume that property attributes are time invariant. In terms of structural changes to houses, we mitigate this concern by excluding transactions that predate renovations. Water view is a key independent variable, which could change over time as trees grow or are cut down or new houses are built. However, we have no reason to believe that any time variation in property attributes would be correlated with turbine views.

4 Results

Table 2 presents the main results of the impact of offshore wind turbine views on housing prices. Column 1 is the most basic model and includes only property characteristics (including structural attributes, water views, and proximity to the coast dummies), and year and month fixed effects. Column 2 adds Census block group fixed effects. Column 3 adds property fixed effects and removes all time-invariant property control variables.

The top three rows present the DD coefficients, with the third row being the key coefficient of interest, which is the impact of turbine view on housing prices. The coefficient on Post turbineview is small and negative in Columns 1 and 2, but becomes large and positive in the repeat sales model (Column 3). Because log sale price is the dependent variable, we can interpret the coefficients approximately as percent change due to treatment. Thus, the results suggest that

views of the BIWF changed housing prices by -0.4% to 12.4%. However, all of these coefficients are statistically insignificant, meaning we cannot reject views having no effect on prices. Large decreases in property values are statistically inconsistent with the observed data. The coefficients on Turbineview are positive but statistically insignificant. In part, we interpret this to mean our other control variables (particularly water view and coastal proximity) are capturing differences between properties with and without eventual turbine views.⁸ The coefficient on Post is also insignificant, which makes sense given the inclusion of month and year fixed effects.

Other coastal amenity variable coefficients have expected signs and magnitudes, which bolsters confidence in our modeling strategy. In Columns 1 and 2, the coefficient on Ocean view is positive and statistically significant. In Column 1, the coefficient of 0.084 means that for every ocean point visible from a property, the price increases 8.4% on average. As we said in the introduction, the 95th percentile for Ocean View is three, meaning that property derives a price bump of over 25% relative to a similar property with no ocean view. The Pond view coefficients are smaller in magnitude and statistically insignificant. Our results indicate that proximity to the coast is highly valued. In Column 1, the results suggest that, on average, properties within 0.1 km of the water sell for over 96.6% more than houses 1-3 km from the water, all else equal.⁹ The other distance dummies imply that properties located 0.1-0.25 km from the coast sell for 44.2% more than properties 1-3 km away, properties located 0.25-0.5 km away sell for 30.3% more, and properties located 0.5-1.0 km away sell for 14.6% more. Similar to Ocean view, the magnitude

⁸ If we estimate a version of the DD model without water views and coastal proximity dummies, the coefficient on Turbineview is positive and highly statistically significant.

⁹ As noted earlier, when the dependent variable is log transformed, coefficients can be interpreted approximately as percent change. However, this is less accurate the larger coefficients become, in which case a formal transformation should be used. In this case, the coefficient of 0.676 is translated into percentage terms by exponentiating, $e^{0.676} - 1 = 0.966$, implying a 96.6% increase in property value.

of these premiums decline substantially as block group fixed effects are added, which makes sense given the spatial correlation between these variables. In contrast, the coefficient on Post turbineview varies little when block group fixed effects are added. We hypothesize this to be the case because of the micro-variation in turbine viewshed, which is much less spatially correlated than water view or distance. This is a clear benefit of using LiDAR DSM data to determine viewshed, as opposed to a simpler metric.

4.1 Robustness checks

We now test the robustness of our results along two dimensions: distance from the coast restrictions and temporal restrictions. We want the comparison group of properties without a turbine view to be as similar as possible to those with a turbine view. Even with our extensive set of control variables in Table 2, it is possible that properties further from the coast are not a good control group. To assess this concern, we estimate our models using only properties that are within successively smaller distance bands from the coast. Our main models in Table 2 have a distance restriction of 3 km; we additionally test distance restrictions of 2 km and 1 km. Finally, we include only properties that have a view of the water (either ocean or coastal salt pond). In this very restrictive sample, we are comparing properties with a view of the turbines and a view of the water to those properties that just have a view of the water. In terms of temporal restrictions, we additionally estimate our models using only transactions from the time period 2010-2020, whereas the main results use transactions 2005-2020. Two concerns exist with the longer time window. First, 2005-2009 contains the peak and crash of the housing market, which could have affected properties with and without ocean views differently. Second, the long time

period increases the chance that the hedonic function changes over the course of the sample (Kuminoff and Pope 2014).

Table 3 presents the results of robustness checks for these two extensions. In all, the table presents results from 16 regression models. Panel A uses the cross-sectional model (same as Column 2 of Table 2) and Panel B uses the repeat sales model (same as Column 3 of Table 2). The first set of four columns uses the sample period 2005-2020 and the second set of four columns uses 2010-2020. The distance and water view restrictions are listed at the top of each column with sample restrictions increasing with successive columns in each set. Across all models, we find that these sample restrictions have little impact on results. The estimated coefficients range from -0.016 to 0.168, but none are statistically different from zero, similar to the results in Table 2. In both panels, standard errors grow as restrictions are imposed, which makes sense because the sample size is decreasing. For instance, less than 10% of transactions included in the main sample are included in the repeat sales sample of properties with an ocean view.

Additional robustness checks are presented in the online appendix. Tables A1 and A2 examine results when the sample is restricted to areas of the mainland that have views of BIWF unobstructed by Block Island itself. Table A3 excludes all properties within 1000 m from the east boundary of Narragansett but not the south boundary. The idea being that those houses are more likely to have peripheral views of the turbines instead of direct. Table A4 allows for heterogeneous treatment effects as a function of distance to the turbines. Table A5 changes the post treatment date to October 2015 in case platform construction is the correct treatment date. Tables A6 and A7 replace the binary variable Turbineview with a variable Turbineview count

that equals the number of turbines visible from a property.¹⁰ Across all of these tables, treatment effect coefficients similarly range from negative to positive and are never statistically significantly different than zero.

Taken together, these results suggest that the ability to see offshore turbines that are at least 27 km (17 miles) away have no impact on property value.

4.2 Turbine view from Block Island

In this section, we examine the impact of turbine view on sales prices using only properties from Block Island. Because the turbines are only 4.8 km from shore at the nearest point, this is unlikely to be a relevant distance for future offshore wind developments. However, for the sake of completeness, we still feel it is worthwhile to present the results.

There are far fewer observations and as a result we modify our model. After the same sample cuts as the mainland sample, there are only 307 transactions during 2005-2020. We move away from DD and instead estimate a simpler cross sectional model, as follows:

$$(2) \quad \ln(\text{price}_{imt}) = \beta_1 \text{Post_turbineview}_{imt} + \beta_2 \text{oceanview}_i + \mathbf{X}_i \boldsymbol{\beta}_3 + \gamma_t + \varepsilon_{it}$$

All variables are as defined in Equation 2, except \mathbf{X}_i , which is a stripped down set of controls.¹¹

Summary statistics for this sample are presented in Table A8 of the online appendix.

Compared to houses on the mainland, houses on Block Island have similar structural characteristics, but there are other important differences. The average sales price on Block Island

¹⁰ Alternatively, one could examine heterogeneity in views based on which portions of turbines are visible, such as hub, blades, or platform. We leave this for future work.

¹¹ If we estimate a DD model for the Block Island sample, the resulting coefficients suggest overfitting or insufficient degrees of freedom. Across many different specifications, the coefficients on *Post_turbineview* and *Turbineview* are near-equal in magnitude and opposite in sign. Thus, we do not trust these results. In Equation 2, the matrix \mathbf{X} includes lot size, lot size squared, number of bedrooms, number of bathrooms, a quadratic polynomial of construction year, and dummy variables for coastal proximity. Given the evidence of overfitting, we opted for a slightly more parsimonious model. Also, given the relatively small number of observations in this analysis, estimating a repeat sales model is untenable.

is \$1,294,090 in 2020 dollars, which is considerably more than double average prices on the mainland. Also, the average distance to a coastal waterbody is 0.52 km with a maximum distance of 1.7 km, and 94% of transactions have a water view (Ocean view + Pond view >0). The average distance to a wind turbine is 7.7 km (4.8 miles) and 20% of transactions have a turbine view. The range of distances to the nearest turbine is 5 to 12 km (3.1 to 7.5 miles).

Table 4 presents the results of the Block Island analysis. We present two columns that only differ by included years: 2005-2020 in Column 1 and 2010-2020 in Column 2. The turbine view coefficients are negative but statistically insignificant in both columns. This implies that views of the BIWF similarly have no statistical impact on housing prices on Block Island.¹² Similar to the results from on the mainland, ocean view is highly valued and statistically significant. In terms of distance to the coast, the results suggest large premiums for proximity. Houses within 0.1 km are about 74% more expensive than those greater than 0.5 km away, and houses between 0.1 and 0.25 km are 28% – 31% more expensive.

Another possibility to consider is that there is an island-wide treatment effect of BIWF, meaning that all house values are similarly negatively (or positively) impacted resulting in no differential impact to those properties with turbine views. Carr-Harris and Lang (2019) took this approach arguing that the island is small enough and the turbines prominent enough that any tourist visiting the island would have a hard time avoiding them. They estimate a difference-in-differences model comparing trends in the short-term rental market on Block Island to other New England tourist destinations. As a first step toward undertaking this type of analysis with

¹² Residents on Block Island could actually see the turbine platforms starting in October 2015, though to be clear the viewshed would be considerably smaller than after the full tower is complete. Given this, it is possible that the post treatment period should be defined as starting in October 2015. Appendix Table A9 examines results with this altered post definition and results are similar. We present an additional robustness check in Appendix Table A10 that uses island region fixed effects for the three regions (North, Southeast, Southwest) instead of block groups. Results are qualitatively identical.

property transactions, we compared time trends in average Block Island prices to those of Martha's Vineyard and Nantucket Island. We present this graph in the appendix as Figure A3. The trends are far from parallel pre-treatment: the trend for Block Island is much flatter than the other two locations. We are unsure why this is the case, but the disparity in trends far predates construction of BIWF. Thus, we conclude that this type of analysis is inappropriate for these data and would likely lead to biased results.

5 Conclusion and Policy Implications

In the coming decades, offshore wind energy capacity is expected to greatly increase in the United States. This shift will be unambiguously good for greenhouse gas emissions reductions, but many coastal communities are concerned about local impacts to their livelihood. This article examines one concern related to property value declines due to a loss of pristine ocean views. In the tradition of non-market valuation and applying the tool of hedonic valuation, we are estimating the valuation of turbine views by property owners. Much of the literature to date focuses on tourist perceptions or valuation, so we offer a complementary and much needed perspective.

We examine the price impacts of mainland, coastal Rhode Island properties, which range in distance from 27 to 44 km (17 to 27 miles) to the BIWF, a five-turbine, 30 MW installation located in state waters. A critical aspect of our analysis is the use of LiDAR DSM data to comprehensively assess property-specific turbine views. Not only is this an improvement over other methods of determining viewshed, but it yields micro-variation in viewshed that improves estimation of impacts. Using a variety of specifications and samples, we find no evidence of adverse impacts due to views of BIWF. Our results consistently indicate point estimates that

range from small and negative to large and positive, but all are not statistically different than zero. We conclude that property owners in coastal areas do not value ocean views with turbines any differently than ocean views without turbines.

Future OSWFs will be comprised of larger turbines and more turbines spaced further apart. It is an open question whether valuation of these types of OSWFs will be the same as we find for the BIWF. Our secondary finding that turbine views also do not significantly impact property values on Block Island is useful in this regard. Larger turbines of future OSWFs will be slightly larger on the horizon than BIWF is from the mainland, but will never be as visually prominent as the BIWF is from Block Island. Thus, we would expect similarly negligible effects. Regardless, future research should examine property value impacts of these larger OSWFs. In addition, with many OSWFs, greater potential for analysis of heterogeneity will exist – related to size of turbines, number of turbines, distance from the coast, and direct vs. peripheral views.

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Figures and Tables

Figure 1: Study area

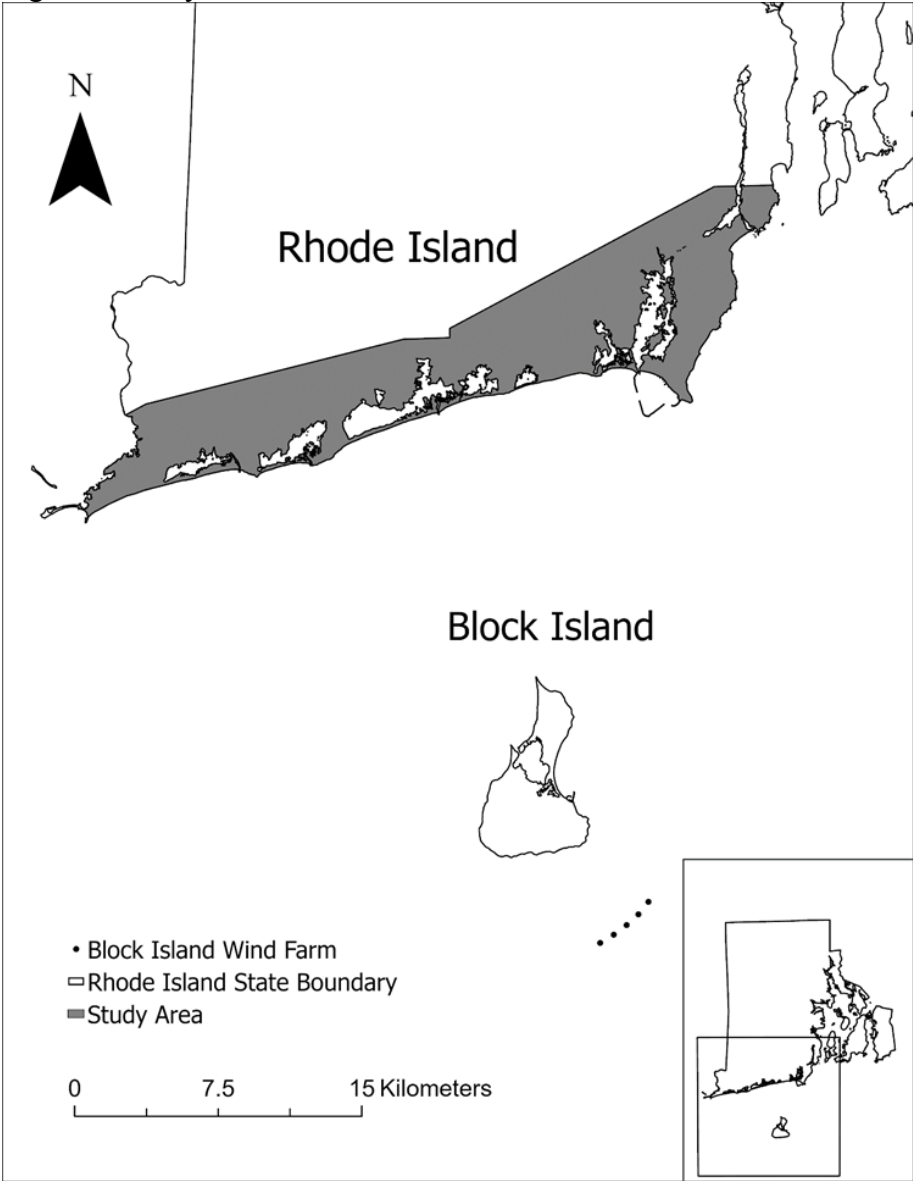


Figure 2: Turbine viewshed for small area on mainland of Rhode Island

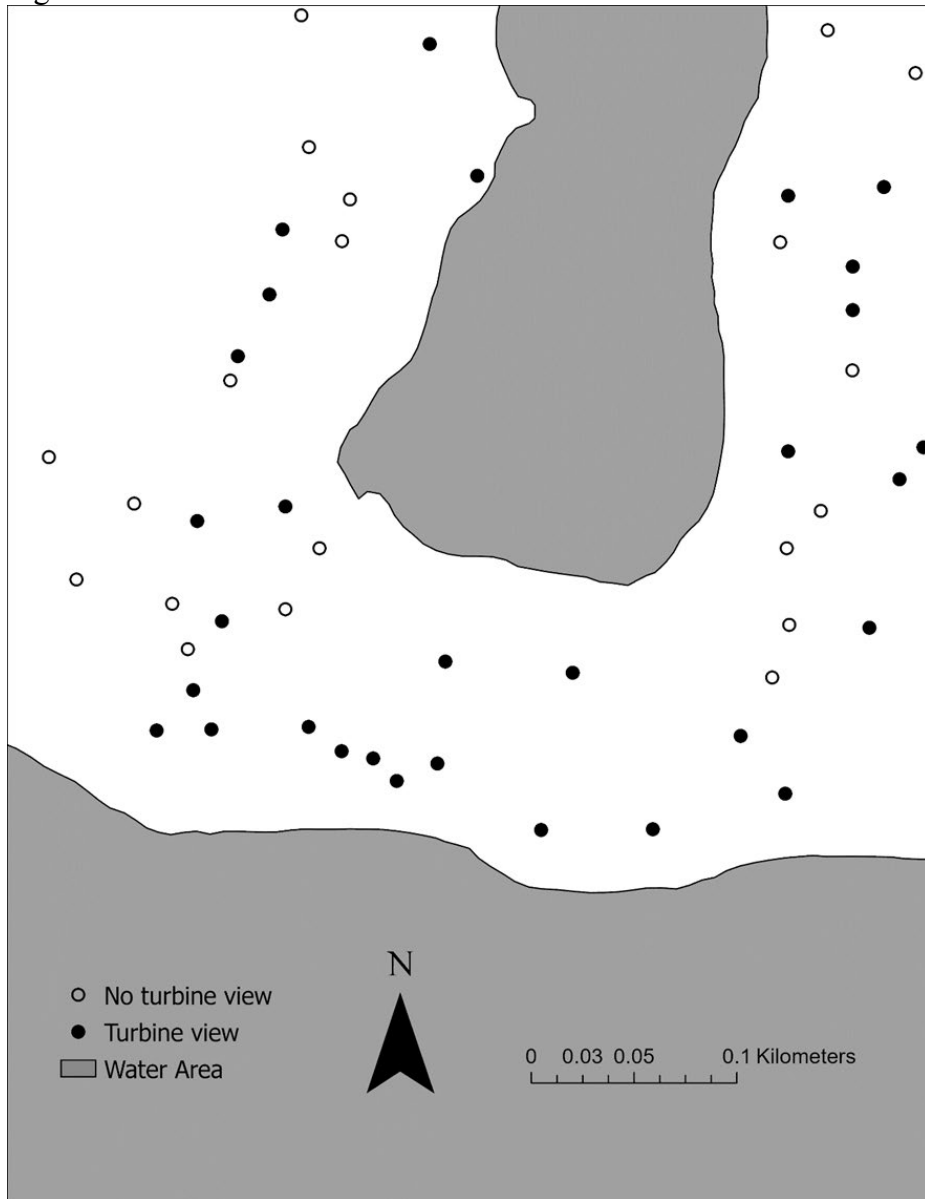
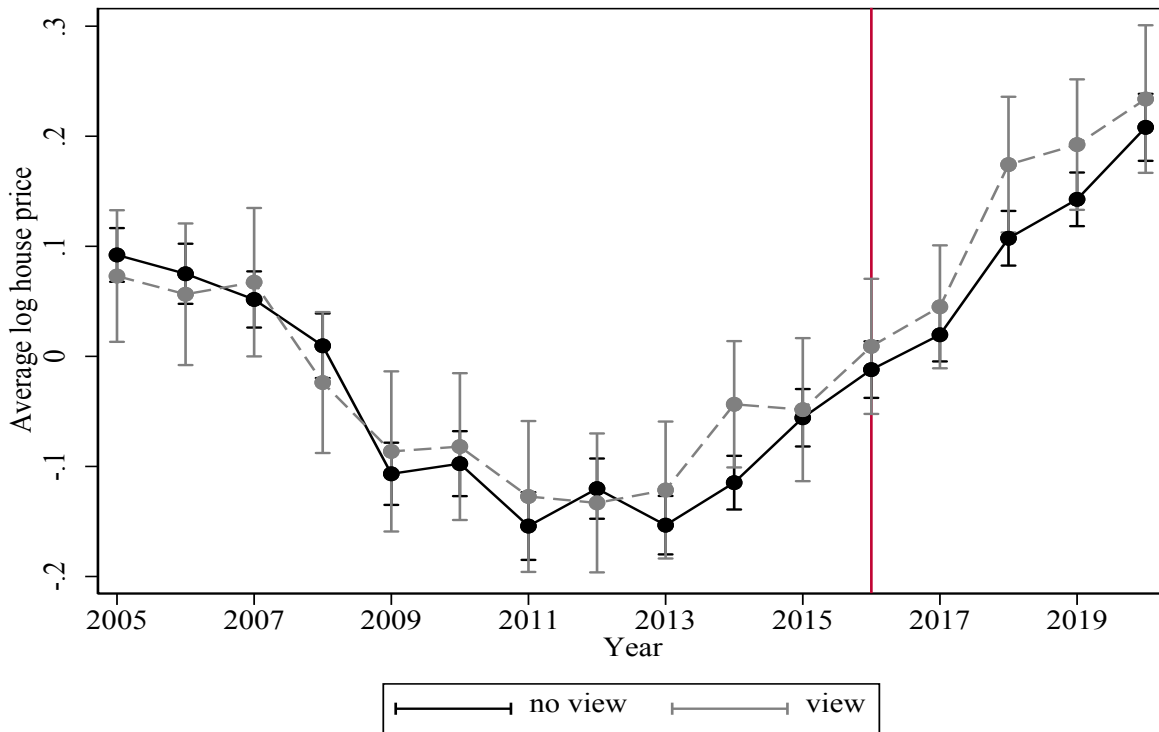


Figure 3: Housing price trends for properties with and without turbine views



Notes: A version of Equation 1 that excludes *turbineview* is estimated and residuals are calculated. The figure plots the mean residuals for properties that have a turbine view post construction and those that do not by year. The vertical line indicates the date of the BIWF construction.

Table1: Housing summary statistics

Variables	Mean	Standard Deviation
Sales price (\$1000)	560.16	777.16
Turbineview (1 = yes)	0.15	0.36
Post turbineview (1 = yes)	0.05	0.21
Post (1 = yes)	0.30	0.46
Ocean view	0.41	1.10
Pond view	0.06	0.29
Bedrooms	3.11	0.91
Bathrooms	2.37	1.10
Living area (1000sq. ft.)	3.59	1.78
Lot size (1000sq. ft.)	27.24	49.23
Air conditioner (1 = yes)	0.40	0.49
Building year	1971.41	31.67
Distance to waterbody (km)	0.81	0.73
Distance to nearest turbine (km)	33.99	3.89
Observations	11058	

Notes: Bathrooms is full plus half baths. Ocean view is the number of visible points on the ocean from a house. Pond view is the number of visible points on coastal ponds from a house.

Table 2: Impact of offshore wind turbine views on housing prices

Variables	Dependent variable: Log sale price		
	(1)	(2)	(3)
Turbineview	0.054 (0.035)	0.016 (0.021)	
Post	-0.016 (0.023)	0.003 (0.021)	0.007 (0.087)
Post turbineview	-0.004 (0.018)	-0.001 (0.020)	0.124 (0.089)
Ocean view	0.084 (0.011)***	0.065 (0.012)***	
Pond view	0.023 (0.021)	0.020 (0.016)	
Distance to water dummies			
0-0.1 km	0.676 (0.075)***	0.479 (0.037)***	
0.1-0.25 km	0.366 (0.066)***	0.168 (0.030)***	
0.25-0.5 km	0.265 (0.050)***	0.078 (0.018)***	
0.5-1.0 km	0.136 (0.046)***	0.040 (0.017)**	
Property controls	Yes	Yes	No
Year FEs	Yes	Yes	Yes
Month FEs	Yes	Yes	Yes
Census Block Group FEs	No	Yes	No
Property FEs	No	No	Yes
Observations	11,058	11,058	6,665
R-squared	0.531	0.617	0.883

Notes: Table presents results from three separate regressions. Sample includes properties in Washington County, Rhode Island that are within 3 km of the coast and transact in the years 2005-2020. Property control variables are lot size, lot size squared, living area, living area squared, number of bedrooms, number of bathrooms, a cubic polynomial of construction year, and an indicator for air conditioning. Standard errors are shown in parentheses and are clustered at the tract level. *, **, and *** indicate significance at 10%, 5%, and 1%, respectively.

Table 3: Robustness checks

Sample period Distance from coast restrictions	2005-2020				2010-2020			
	< 3 km	< 2 km	< 1 km	Water view only	< 3 km	< 2 km	< 1 km	Water view only
Panel A: Cross Sectional								
Post turbineview	-0.001 (0.020)	-0.005 (0.020)	-0.009 (0.023)	0.040 (0.040)	-0.012 (0.021)	-0.012 (0.022)	-0.016 (0.028)	0.043 (0.043)
Observations	11,058	9,981	7,788	2,072	7,752	6,998	5,493	1,486
R-squared	0.617	0.620	0.601	0.563	0.640	0.641	0.625	0.607
Panel B: Repeat Sales								
Post turbineview	0.124 (0.089)	0.129 (0.096)	0.122 (0.104)	0.130 (0.266)	0.109 (0.070)	0.112 (0.079)	0.101 (0.091)	0.168 (0.348)
Observations	6,665	5,909	4,415	994	4,567	4,054	3,023	696
R-squared	0.883	0.886	0.886	0.884	0.911	0.915	0.917	0.922

Notes: Table presents results from 16 regressions; each column of each panel is a different regression. Sample includes properties in Washington County, Rhode Island with sample cuts based on year of transaction, distance to the coast, and water view (ocean + pond view >0). The dependent variable is log sales price. For Panel A, the regression specification includes property characteristics (as defined in Table 2), distance to water dummies, year fixed effects, month fixed effects, and census block group fixed effects. For Panel B, the regression specification includes year fixed effects, month fixed effects, and property fixed effects. Standard errors are shown in parentheses and are clustered at the tract level. *, **, and *** indicate significance at 10%, 5%, and 1%, respectively.

Table 4: Estimates of the impact of offshore wind turbine view on Block Island housing prices

Variables	Sample period	
	2005-2020	2010-2020
Post turbineview	-0.048 (0.115)	-0.035 (0.120)
Ocean view	0.053 (0.023)**	0.083 (0.027)***
Pond view	-0.022 (0.072)	-0.135 (0.089)
Distance to water dummies		
0-0.1 km	0.552 (0.128)***	0.556 (0.159)***
0.1-0.25 km	0.246 (0.088)***	0.273 (0.106)**
0.25-0.5 km	-0.081 (0.081)	-0.061 (0.100)
Year FEs	Yes	Yes
Property controls	Yes	Yes
Census Block Group FEs	Yes	Yes
Observations	307	217
R-squared	0.406	0.394

Notes: Table presents two different regression models. The dependent variable is log sales price. Sample includes properties on Block Island, Rhode Island, with sample cuts based on year of transaction defined differently in each column. Property control variables are lot size, lot size squared, number of bedrooms, number of bathrooms, and a quadratic polynomial of construction year. Robust standard errors are shown in parentheses. *, **, and *** indicate significance at 10%, 5%, and 1%, respectively.

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An Analysis of the Rise and Fall of Cape Wind and its
Implications in Environmental Policy

A Thesis Submitted to
The Faculty of the Department of Public Policy and Law
In Candidacy for the Baccalaureate Degree With Honors in
Public Policy and Law
By
Madeline R. Recker

Hartford, Connecticut
May 2023

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Abstract

Cape Wind was the first proposed offshore wind farm in the United States, but it was never built. Proposed in 2001 and canceled in 2017, Cape Wind fought against well-funded opposition groups who used the regulatory and permitting process to create legal battles every step of the way. The Alliance to Protect Nantucket Sound, which was composed largely of members of the 1% who owned ocean property off the coast of Cape Cod which was where the wind farm was proposed, contributed millions of dollars to ensure that Cape Wind was never built. During public meetings to discuss Cape Wind, the Alliance to Protect Nantucket Sound used local and national politicians to take up time that was reserved for the public comment as a tactic to try and suppress support. Additionally, there were a variety of Environmental Impact Statements and review processes that Cape Wind needed to pass to begin construction on the turbines, and the Alliance used these regulations to sue Cape Wind and the federal agencies supporting Cape Wind as a means to delay the project. This thesis examines the tactics used by the Alliance to delay and eventually cancel the construction of Cape Wind. It further links these tactics to practices that are utilized to cancel environmentally friendly projects or fund projects that are harmful to the environment, despite public opinion.

Introduction:

Since the Industrial Revolution in the 1800s, the temperature of our planet has increased by 2 degrees Fahrenheit. 5 of the warmest years on record have been recorded since 2015.¹ Global warming and climate change have become an increasingly serious issue for the world. There have been increases in the frequency and severity of natural disasters across the world, and Antarctica has lost over 400 trillion tons of ice since the late 1990s which has led to a rise in sea level and the destruction of coastal communities.² While it is true that throughout its history, the Earth has had a cycle of warming temperatures and then cooling again, it has never happened as quickly as it is being recorded now. Past cycles have taken thousands of years to complete. Global warming is caused by the emission of carbon dioxide (CO₂) as well as other pollutants like methane into the atmosphere, which are then trapped and reflected down to Earth, increasing the temperature, and resulting in climate change.³ Scientists have warned that we must limit the rise in the temperature to 1.5 degrees Celsius by 2040, or the damage to our planet will be irreversible.

To combat climate change, countries have begun to make the transition from fossil fuels that release CO₂ into the atmosphere to renewable energy sources like solar, wind, and hydro energy. European countries have taken the lead in the transition to clean power, with the United States only beginning to truly invest in the past two decades. The younger generations of Americans have become increasingly concerned about climate change and its impact. Sixty-nine percent of Americans favor the United States becoming carbon neutral by 2050, as well as prioritizing the production of renewable energy sources.⁴ The renewable energy source with the most potential for

¹ Jeff Turrentine, "Global Warming 101," *National Resource Defense Council*, April 7, 2021, <https://www.nrdc.org/stories/global-warming-101#warming>.

² Turrentine.

³ Turrentine.

⁴ Alec Tyson, Cary Funk, and Brian Kennedy, "What the Data Says About Americans' Views of Climate Change," *Pew Research Center*, April 18, 2023, <https://www.pewresearch.org/short-reads/2023/04/18/for-earth-day-key-facts-about-americans-views-of-climate-change-and-renewable-energy/>.

energy production is wind power, especially offshore wind power due to the fact that winds off the ocean are the most powerful.⁵ In 2001, the first offshore wind project for the United States was proposed off the coast of Cape Cod, Massachusetts. In 2017, Cape Wind was canceled after a battle that included lawsuits, public debates, legislative battles, and large sums of money among other things. Cape Cod is one of the richest areas in the United States, with many powerful elites living there year-round or having inherited estates where they summer. These individuals were the main voices behind the legal battles and fundraising campaigns against Cape Wind. My thesis will conduct an in-depth analysis about the role of elites in the destruction of Cape Wind, and how this demonstrates a common theme in environmental policy that is still an issue today.

The first chapter of my thesis will focus on the origins of Cape Wind, including Jim Gordon's creation of the project, and the subsequent rise of groups in opposition. The largest and most prominent opposition group that was formed was the Alliance to Protect Nantucket Sound. The Alliance consisted primarily of elites who had large sums of money that they were willing and able to donate to a cause whose sole purpose was to block the creation of Cape Wind. It also discusses the group in favor of Cape Wind that was formed, known as Clean Power Now. Clean Power Now was formed in opposition to the Alliance to Protect Nantucket Sound and was comprised of a large group of local homeowners on the Cape who donated small sums of money. In contrast, the Alliance had a select group that was donating large sums of money, sometimes millions.

The second chapter serves to lay out the timeline of Cape Wind's progress through the legal and policy process, from its initial proposal in 2001, to the official termination of the project in 2017. The timeline itself shows the variety of regulations already required in the permitting process

⁵ Liz Hartman, "Computing America's Offshore Wind Energy Potential", Energy.gov, September 9th, 2016, <https://www.energy.gov/eere/articles/computing-america-s-offshore-wind-energy-potential>.

for the construction of the offshore wind farm, but it also shows the variety of court cases that Cape Wind had to fight against private citizens and interest groups. These legal battles not only took time, sometimes years, to resolve but they also drained the funding for Cape Wind that was intended to be used for the construction fees. It also shows the evolution of the regulatory process, specifically the transition of oversight from the Army Corps of Engineers to the Department of the Interior.

Chapter three examines the evolution of public opinion of average citizens and the role public attitudes played as the process for approval unfolded. This chapter analyzes public opinion by looking at survey results as well as op-ed articles from local and national newspapers to show what much of the state wanted. By looking at these public opinion articles, it shows a wide variety of reasons that people were in favor of the project. In addition to print sources, different public forums that were held to allow for debate regarding the construction of Cape Wind are examined. These debates were often contentious with the opponents and proponents of Cape Wind attacking one another.

The final chapter analyzes the concept of issue framing to understand why at first the Alliance successfully argued that their concerns were about Cape Wind's environmental impacts when in fact they were concerned about visual impact on their properties. It is important to note that the first Environmental Impact Statement released by the government which showed minimal impact to the Nantucket Sound ecosystem, the support of the public changed considerably in favor of Cape Wind. After the general public learned of this information, they turned from supporting the Alliance to disliking them after realizing their true motives. It further discusses the role that corporations, legislatures, and PACs, or political action committees, can have on environmental policy. Additionally, chapter 4 compiles all the information from the previous chapters and the fate of offshore wind since 2017 to show how the influence of elites can be essential or detrimental to the production of offshore wind.

Chapter 1: The Origins of the Controversy and the Stakeholders

Why Offshore Wind

While scientists were discussing climate change as early as the 1930's, the issue was not effectively communicated to the American public until the Presidential Election of 2000.

Democratic candidate and former Vice President Al Gore warned of the grim future that no action against climate change would create. He talked of rising sea levels, droughts, and increasingly severe natural disasters. Despite not winning the election, Gore continued to discuss climate change and even produced a film, *An Inconvenient Truth*, talking about the effect that continuing to rely on fossil fuels would have on the planet.⁶ One way to combat these issues was through alternative energy sources. Solar power was the most well-known alternative energy source, but hydropower and wind power were also beginning to gain notoriety.

In Europe wind turbines, especially offshore wind turbines, were becoming a popular alternative to wind power located on land. An investor by the name of Jim Gordon noticed this development and decided that it was time for the United States to join the world of offshore wind. Gordon, who founded Energy Management in 1975, began to research the average wind speeds of different points along the U.S. coastline, to see which area would be the best for development, in terms of cost effectiveness as well as energy yield. In a joint study by the Department of Energy and the Department of the Interior, the researchers found that the Massachusetts coast has the greatest Net Technical Energy Potential of all 50 states, meaning that Massachusetts was identified as the best place for offshore wind turbines to be placed in terms of energy generation.⁷

⁶ History.com Editors, "Climate Change History", History.com, A&E Television Networks, August 8th, 2022, <https://www.history.com/topics/natural-disasters-and-environment/history-of-climate-change>.

⁷ Liz Hartman, "Computing America's Offshore Wind Energy Potential", Energy.gov, September 9th, 2016, <https://www.energy.gov/eere/articles/computing-america-s-offshore-wind-energy-potential>.

After deliberation, Jim Gordon decided that Nantucket Sound, off the coast of Cape Cod in Massachusetts was the best place for America's first offshore wind farm. At the heart of New England with history-rich Boston as its capital city, as well as a coastline with some of the most beautiful beaches in the United States, generations of wealthy Americans have flocked to Massachusetts as a place to settle down and raise a family. These wealthy families own property on the Massachusetts coastline as well as the surrounding islands. Excluding Washington D.C, Massachusetts is currently ranked second in highest average income behind only New Jersey.⁸ Despite this, the wealth gap is large, and while there are many millionaires, there are also many citizens of Massachusetts who live paycheck to paycheck. For these citizens, the winter of 2001 had been particularly brutal, because the price of oil and electricity had skyrocketed. At the same time, many Cape residents were becoming increasingly frustrated with the Cape Cod Canal electrical plant, which was a fossil-fuel fired plant providing electricity to most of the Cape. The Cape Cod Canal electrical plant was significantly degrading the air quality not only for the Cape, but for the entire state.⁹ Local citizens as well as state representatives were calling for change.

Recognizing the public's frustration with the electrical plant as well as the potential for alternative energy initiatives off the coast of Cape, Gordon pulled his investments from natural gas and teamed up with a group of engineers and other private investors. While there was substantial support for the wind farm idea, Spyro Mitrokostas, who was the executive director of the Cape Cod Technology Council, had a warning for Gordon. He warned that, "Only two or three hundred people run the Cape. If you don't have them on your side, forget it." Nevertheless, because of the apparent overall public support for the project, Gordon and his group agreed to budget \$5 million in

⁸ "Per Capita Income by State," World Population Review, Accessed February 12th, 2023, <https://worldpopulationreview.com/state-rankings/per-capita-income-by-state>.

⁹ Wendy Williams and Robert Whitcomb, *Cape Wind: Money Celebrity, Class, Politics, and the Battle for Our Energy Future on Nantucket Sound* (New York: Public Affairs Books, 2007), pg. 4.

development costs for the construction of a wind farm off the coast of Cape Cod, and create a company known as Cape Wind Associates, LLC.¹⁰

Little did Gordon know that he would be embarking on a journey that would encompass sixteen years, and over \$100 million of his own money, and that the journey would end in failure, with not a single turbine ever having been constructed when he announced the end of the project in December of 2017.¹¹ It is important to ascertain how a project with so much—public support failed to materialize. While there was no singular event that ruined the Cape Wind project, a variety of developments that took place over those 16 years led to the demise of the project. As the Cape Wind timeline reveals, there were moments where it seemed as if nothing would be able to stop its development, and others where it seemed that this would be the time the project was finished for good. The full story of the rise and fall of the proposed wind farm known as “Cape Wind” involves a variety of landmark events, decisions, and actors. The project’s history can be divided into five stages. This chapter discusses the first stage: the stakeholders. The other stages, which include the regulatory process, public opinion, issues in Congress and legal battles, and the bankruptcy of Cape Wind, will be discussed in detail in the following chapters. The timeline appears in Figure 1.

¹⁰ Williams and Whitcomb, 8.

¹¹ Katharine Q. Seelye. “After 16 Years, Hope for Cape Cod Wind Farm Float Away,” *New York Times*, December 19th, 2017. <https://www.nytimes.com/2017/12/19/us/offshore-cape-wind-farm.html>.

Figure 1: A Timeline of the Cape Wind Project

<p>August 2001</p> <p>Jim Gordon meets with the <i>Cape Cod Times</i> to discuss Cape Wind, and the Alliance to Protect Nantucket Sound is formed.</p>	<p>November 2001</p> <p>Cape Wind submits an application to the Army Corps of Engineers to construct a data tower in Horseshoe Shoal; the next day they submit an application for the wind turbines.</p>	<p>January 2002</p> <p>The first public hearing regarding the construction of Cape Wind is conducted.</p>	<p>June 2002</p> <p>The group Clean Power Now is formed.</p>
<p>August 2002</p> <p>The Army Corps of Engineers grants Cape Wind the permit to construct a data tower.</p>	<p>August 2003</p> <p><i>Ten Taxpayer Citizen Group v. Cape Wind Associates</i> is decided in favor of Cape Wind.</p>	<p>September 2003</p> <p><i>Alliance to Protect Nantucket Sound v. U.S. Department of Army</i> was decided in favor of the Army.</p>	<p>November 2004</p> <p>The Army Corps of Engineers issues a Draft Environmental Impact Statement (DEIS).</p>
<p>December 2004</p> <p>A public hearing regarding the Draft Environmental Impact Statement is attended by Governor Mitt Romney.</p>	<p>August 2005</p> <p>The Energy Policy Act of 2005 is signed, transferring responsibility for Cape Wind permitting to the Department of the Interior, and more specifically, to the Mineral Management Service (MMS).</p>	<p>September-November 2005</p> <p>Senator Don Young from Alaska attempts to add amendments to a bill regarding the Coast Guard that would be detrimental to Cape Wind.</p>	<p>December 2005</p> <p>Robert F. Kennedy Jr. writes an op-ed in the <i>New York Times</i> that causes controversy.</p>
<p>December 2006</p> <p>The Massachusetts State Supreme Court upholds the approval of transmission cables to connect Cape Wind to the power grid.</p>	<p>January 2008</p> <p>The Mineral Management Service releases the new Draft Environmental Impact Statement.</p>	<p>March 2008</p> <p>The Mineral Management Service holds public hearings.</p>	<p>January 2009</p> <p>The Mineral Management Service issues a Final Environmental Impact Statement (FEIS).</p>
<p>October 2009</p> <p>The Wampanoag tribes argue that Horseshoe Shoal should be placed on the National Register of Historic Places.</p>	<p>January 2010</p> <p>The U.S. National Park Service agrees with the tribes, and a review process under section 106 of the National Historic Preservation Act Begins.</p>	<p>April 2010</p> <p>The Federal Advisory Council on Historic Preservation recommends to Interior Secretary Ken Salazar that he reject Cape Wind.</p>	<p>October 2010</p> <p>Secretary Ken Salazar, issues Cape Wind Associates the official lease to operate the wind farm.</p>
<p>July 2011</p> <p>The Aquinnah Wampanoag Tribe of Gay Head files suit against the Bureau of Energy Management.</p>	<p>October-December 2011</p> <p>The claims of various groups filing suit against Cape Wind are consolidated under one case.</p>	<p>January 2015</p> <p>The National Grid and NStar both terminate their power contracts with Cape Wind.</p>	<p>February 2016</p> <p>Cape Wind Associates submits a request for a two-year suspension of the operations term of its commercial lease.</p>
<p>July 2016</p> <p>The case <i>Public Employees for Environmental Responsibility v. Abigail Ross Hopper, Acting Director, U.S. Bureau of Ocean Energy Management</i> decided against Cape Wind.</p>	<p>June 2017</p> <p>Cape Wind Associates submits another request for a two-year suspension of the operation terms and a suspension of its payment obligations.</p>	<p>July 2017</p> <p>The BOEM released the supplemental Environmental Impact Statement, saying that there are no geologic issues predicted.</p>	<p>December 2017</p> <p>The Cape Wind project is officially canceled.</p>

The Alliance to Protect Nantucket Sound

On August 9th, 2001, the *Cape Cod Times* ran a story interviewing Gordon about his idea for an offshore wind farm. The interview provided a basic outline of the project for the public, describing the plan to use between 150-200 turbines, as well as the ability of these turbines to generate “up to 420 megawatts of electricity - close to Cape Cod's summer peak load”. The turbines were predicted to be 258 feet tall each, with three 160-foot-long rotating blades.¹² In the interview, Gordon also stated that the turbines would be built in Horseshoe Shoal and in waters as shallow as 8 feet deep.¹³ Since the *Cape Cod Times* is a local paper, news of the story traveled quickly across the Cape, and unlike what Gordon had expected, there were mixed opinions on the wind farm, with a variety of concerns being voiced. Wind power was a new concept for the East Coast. Before the proposal, all wind energy proposals in the United States had been focused out West, where there were flat lands that were unpopulated and had the space for wind farms. For example, out West, many homeowners are legally required to allow drilling rigs to work on their private property, because oftentimes the surface rights and mineral rights are owned by two different entities. In the New England areas however, there are property titles that have been in singular families for generations, even back into the time of King George III.¹⁴ Those in opposition to the wind farm proposal realized that to be effective they needed to band together and present a united front against Cape Wind. As a result, towards the end of August 2001, an opposition group to the Cape Wind farm was formed called the Alliance to Protect Nantucket Sound.¹⁵

¹² Dominic Spinelli, “Historic Preservation & Offshore Wind Energy: Lessons Learned from the Cape Wind Saga,” *Gonzaga Law Review*, Vol. 46 no. 3 (2011): 741-770, <http://blogs.gonzaga.edu/gulawreview/files/2011/09/Spinelli.pdf>.

¹³ James Kinsella, “Wind Farm Airs its Plans,” *Cape Cod Times*, August 9th, 2001.

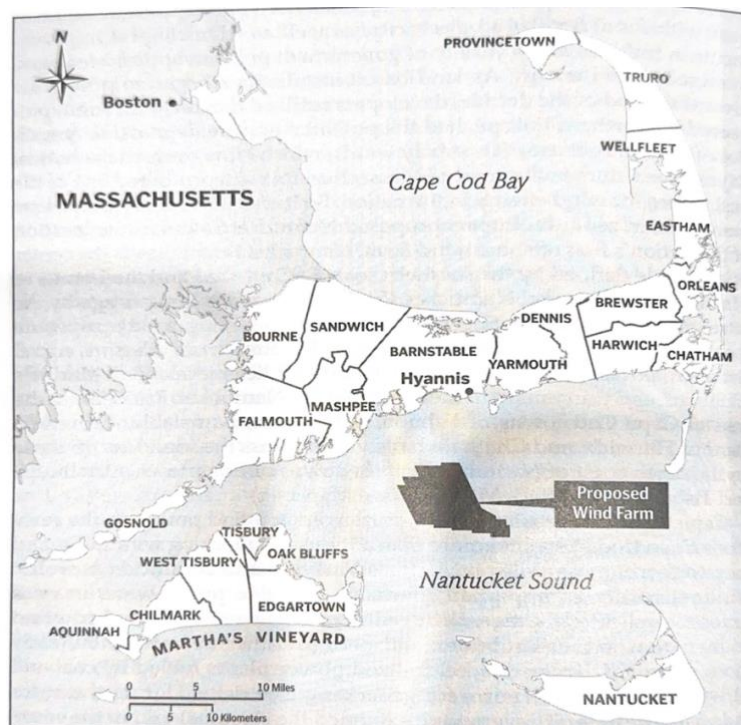
<https://www.capecodtimes.com/story/news/2001/08/09/wind-farm-air-its-plans/50978845007/>.

¹⁴ Williams and Whitcomb, pg. 131.

¹⁵ Robbie Gemmel, *Cape Spin: An American Power Struggle*, directed by Libby Handros, Robbie Gemmel, John Kirby, & Daniel Coffin (2011), Documentary.

The Alliance claimed to catalog a variety of environmental concerns ranging from fears of birds flying full speed into turbines, to the impact they thought they could have on sea turtles and seals, as well as worries regarding a decrease in tourism. Without a doubt, their largest concern was the visual impact. More often than not, members of the Alliance included wealthy individuals with waterfront property on the Cape, with some even coming from the surrounding islands of Nantucket and Martha's Vineyard.¹⁶ Gordon commissioned research that proved the turbines would only be seen approximately half an inch off the horizon on a clear day, but the members of the Alliance to Protect Nantucket Sound were constantly sending out distorted images that showed the Cape as a large industrial site all the way to the coastline, despite the fact that the windfarm was going to be located miles off the coast.¹⁷

Figure 2: Cape Wind Proposed Location



Source: Map and Cape Wind site compiled by author from ESRI, TeleAtlas, and AP. 18

¹⁶ Gemmel, 13:45.

¹⁷ Judith A. Layzer. *The Environmental Case* (Los Angeles: Sage Publications, 2016, 4th edition), pg. 430.

¹⁸ Layzer, 426.

The common theme among members of the Alliance was that wind power was an important resource to consider developing, just not in the Nantucket Sound. In its first fourteen months as an organization, the Alliance to Protect Nantucket Sound was able to raise \$2 million in contributions, which they used to fund TV and radio ads, yard signs, and legal action against Cape Wind. The following year, they took in impressive numbers yet again, with \$4.8 million in donations.¹⁹ While the large donations might suggest that the Alliance had broad-based support, this is not the case. In fact, 94% of its money was coming from 93 “major donors” who gave \$20,000 or more.²⁰ These were not middle-class citizens donating to a campaign about which they felt strongly. Rather, the donors were wealthy members of the area funneling money into a campaign that would protect their view of the ocean.

The Doners

As noted above, the Alliance to Protect Nantucket Sound was successful in getting the rich and powerful to join in their opposition, both as donors and through public appearances. For example, at the time of its founding, the Chief Executive Officer of the Alliance to Protect Nantucket Sound was Douglas Yearly, who was named, “Copper Man of the Year” in 1993 for his success in the mining industry. Before becoming CEO for the Alliance, Yearly was the CEO for another company, known as Phelps Dodge Corporation. Phelps Dodge Corporation used controversial practices such as open-pit mining, and beginning in 2000, the company had been under siege for the deaths of birds near their site that had died due to acid runoff. He was also a property owner on the Cape, and his house cost approximately \$6.8 million at the time he bought it in 1997.²¹ Another oil tycoon that became a member of the Alliance was William “Bill” Koch. William Koch was born into money; his father was the founder of Koch Industries, which was an

¹⁹ Layzer, 432.

²⁰ Layzer, 432.

²¹ Williams and Whitcomb, 84-85.

oil refinery business.²² Over the course of the 16 years that the Alliance was opposing the Cape Wind farm, Koch himself donated “around \$5 million” to the cause.²³ Other particularly notable donors include David McCullough, a historian who has won the Pulitzer Prize, the National Book Award, and the Presidential Medal of Freedom; Paul Fireman, who was the owner of Reebok before selling to Adidas in 2006; and a multi-millionaire member of the Cape Cod Chamber of Commerce, John O’Brian.²⁴ Not only were there individuals contributing money to the Alliance’s campaign, but many nonprofit charities and tax-exempt foundations donated as well. For example, the Egan Family Foundation which is headed by Richard J. Egan, the Massachusetts Republican Party boss and financier and close friend of Mitt Romney, donated \$16,000 to Three Bays, an environmental non-profit. Egan included specific instructions that the money was to be used by the Alliance to Protect Nantucket Sound. Shortly afterwards, the family donated another \$2,500 to Three Bays for the same purpose as well as a \$90,000 donation directly to the Alliance, and a \$100,000 donation to the Beacon Hill Institute, which used the money to conduct an analysis of “doubtful quality,” claiming that Cape Wind would cause significant economic distress to the Cape Cod area with little proof. The Egan Family Foundation again listed a \$300,000 donation directly to the Alliance in 2003.²⁵ That is just one example of wealthy donor contribution efforts to defeat the project, and there are various other charities and foundations that received similar donations.

There were also members of the political elite who could not officially put their support or money behind the Alliance to Protect Nantucket Sound but were still adamantly against the Cape Wind project. Their opposition to the Cape Wind project fueled the Alliance through non-financial means. Arguably, the most influential member of all was Massachusetts Senator Ted Kennedy. The

²² Gemmel, 22:20.

²³ Katharine Q. Seelye. “Koch Brother Wages 12-Year Fight Over Wind Farm,” *New York Times*, October 22nd, 2013. <https://www.nytimes.com/2013/10/23/us/koch-brother-wages-12-year-fight-over-wind-farm.html>.

²⁴ Williams and Whitcomb, xiii, 42, 92, 103.

²⁵ Williams and Whitcomb, 91-92.

younger brother of President John F. Kennedy served as a member of the Senate from 1962 until his death in August of 2009.²⁶ His political network was large, and he enjoyed wide political support in Massachusetts. If he opposed the project, it would be difficult to obtain public support. Another prominent member of the Kennedy family who was against the production of the Cape Wind farm was environmental lawyer Robert F. Kennedy Jr. While Senator Kennedy had to attempt to look outwardly impartial to maintain the respect of the public, Robert Kennedy Jr. did not have this problem, and he was willing and able to openly challenge advocates for Cape Wind. In October of 2002, Kennedy went head-to-head against Jim Gordon on the NPR show *The Connection*. He spent the hour making claim after claim that Cape Wind was going to destroy a sanctuary both for recreational fishing as well as sailing.²⁷ In 2005, he wrote an op-ed piece for the *New York Times* in which he adamantly stated that he supported wind power and the expansion of offshore wind power, but only in the correct places. He accused Gordon of trying to “privatize the commons.”²⁸

While both Kennedys were Democrats, the Alliance also had Republican support from Mitt Romney. While he was running for Governor in 2002, Jim Gordon sent Romney a campaign donation and even attended one of his fund-raisers. Despite this, Romney stated that he’d made campaign promises that he was not going to allow the Cape Wind farm to come to fruition, and that “I never go back on my promises.”²⁹ The Congressman William Delahunt was another politician who was adamantly opposed to production of Cape Wind. Serving until 2011, he was the congressman for the 10th district of Massachusetts, which included Cape Cod, as well as Martha’s Vineyard and Nantucket Island. He felt that the entirety of the Nantucket Sound, including Horseshoe Shoal, belonged to the residents of Massachusetts, especially the residents that he was

²⁶ “Ted Kennedy Dies of Brain Cancer at Age 77,” *ABC News*, August 26, 2009, <https://abcnews.go.com/Politics/TedKennedy/story?id=6692022>.

²⁷ Williams and Whitcomb, 121.

²⁸ Robert F. Kennedy Jr., “An Ill Wind Off Cape Cod,” *New York Times*, December 16, 2005, <https://www.nytimes.com/2005/12/16/opinion/an-ill-wind-off-cape-cod.html>.

²⁹ Williams and Whitcomb, 99.

elected to represent. He continuously said, “Nantucket Sound is not our backyard, it is our front!” Over time, this became a rallying cry of the rich to protect the sound.³⁰ Peter Meyer was another important ally that the Alliance to Protect Nantucket Sound had on their side. While he is not as well-known as the Kennedys or Mitt Romney, he was still able to play an invaluable part in the fight against Cape Wind. Meyer was the publisher for the local *Cape Cod Times*. Since he decided what was printed in the paper every day and opposed the project, the local news stories often portrayed the Cape Wind project in a negative light. It is also important to note that Peter Meyer owned a \$1.2 million home in Osterville, which is an elite gated community complete with a country club.³¹

Clean Power Now

After attending the town meetings about the construction of Cape Wind in January of 2002, supporters of the wind project began to realize that they were becoming overpowered by those who opposed the wind farm. They determined that to make a significant impact they would have to form their own group to fight against the powerful Alliance to Protect Nantucket Sound. After reaching out and gathering support, Barbara Hill was able to form a group to counter the Alliance. On June 10th, 2003, they officially became known as Clean Power Now. They felt that the wind turbine projects were the best way to protect Nantucket Sound given the human impact on climate change, especially along the coast. They created a new slogan to counter the qualms: “It’s not the view...it’s the vision.”³² Clean Power Now tried to focus on all the benefits that the wind farm would bring to Nantucket Sound. They discussed how building and maintaining the turbines could create jobs, and that despite the fears of some opponents, the project could also generate tourism as the first offshore wind farm in the United States. If people were interested in seeing the wind farms, they would be

³⁰ Williams and Whitcomb, xvii.

³¹ Williams and Whitcomb, 107.

³² Gemmel, 8:30.

able to ferry out there and view them from a close range. While they may not have had the support of big-name politicians or donors with deep pockets, Clean Power Now received small donations from local citizens. However, monetarily they were no match for the Alliance to Protect Nantucket Sound. They needed to figure out another way to be effective.

Conclusion

There was a large variety of stakeholders who had something to lose from the creation of Cape Wind. Many of these individuals owned property on the Nantucket Sound shoreline, and they opposed the windmills primarily because they feared their views would be obstructed. The wealthy elites who were against Cape Wind banded together and created a foundation that they could use to fundraise and consolidate themselves into one unified front. This front enabled them to pursue court cases that allowed them to continually delay the production of Cape Wind. The next chapter discusses two more stages of the timeline of Cape Wind: the regulatory process and the legal battles. The Alliance to Protect Nantucket Sound continued to play a prominent role in the ongoing Cape Wind saga.

Chapter 2: The Regulatory Process, Issues in Congress, Legal Battles, and Bankruptcy

Throughout the 17 years of the Cape Wind fight, opponents to its creation used the regulatory process and their funds to delay the construction of the wind turbines for over a decade until there were no funds left and Gordon was forced to cancel the project. Because Cape Wind was the first proposed offshore wind farm in the United States, there was no established regulatory process. As a result, elites were able to use their money and influence to challenge each victory Cape Wind had that brought them closer to construction. Had the opposition, namely the Alliance to Protect Nantucket Sound, not had the money to fund a variety of legal battles and advertisements that spread misleading information about Cape Wind, it is likely that there would currently be a fully functioning wind farm off the coast of Massachusetts. This chapter will discuss the different government regulations that the Cape Wind project needed to follow, as well as the legal battles that were fought along the way. Emphasis will be placed on the elites' ability to hijack environmental policy and mold it to fit their standards.

The Coastal Zone Management Act

To understand the legal battles surrounding Cape Wind, it is necessary to first learn the government entities and regulations that were involved. The first such regulation is the Coastal Zone Management Act (CZMA). When Gordon proposed the Cape Wind farm, he suggested that the turbines be in Nantucket Sound's Horseshoe Shoal. Horseshoe Shoal is a sandbar that was once above water thousands of years ago, so the water remains relatively shallow compared to the ocean surrounding it.³³ These shallow waters were selected because it allows for the easiest and most economically efficient construction of the turbines. The first challenge that Gordon would face was obtaining the proper permit.

³³ Layzer, 428.

Under the CZMA, the United States maintains territorial control of the ocean for 12 nautical miles from the coastline, and the individual states control the first three nautical miles from their individual coastline. The federal government maintains control of the remaining nine miles of water.³⁴ Horseshoe Shoal is located five nautical miles off the coast of Massachusetts, meaning that the project is in federal waters. However, to use the power generated, there would need to be cable transmission lines built from the turbines themselves to the local power grid in Cape Cod and through state jurisdiction. The CZMA is set up so that states must create what are known as Coastal Zone Management Plans, or CZMP's, that describe how the state plans to use and manage the coastline.

Regarding offshore wind power, Massachusetts could create a CZMP that would not permit the construction of the transmission lines.³⁵ The CZMA states that CZMP's must provide, "adequate consideration of the national interest involved in planning for, and managing the coastal zone, including the siting of facilities such as energy facilities which are of greater than local significance."³⁶ At the time, if Massachusetts were able to prove that Horseshoe Shoal is an area that is of such great local significance, they would potentially be able to use this to halt the construction of Cape Wind. However, this would prove to be almost impossible. In 1981, there had been an attempt to make Nantucket Sound a federal sanctuary, which would prevent new development. The Massachusetts Office of Coastal Zone Management stated that the sound did not meet the criteria for a federal sanctuary because it lacked outstanding resources. The Office concluded, "Adequate resources exist in Nantucket Sound; however, the majority of those resources

³⁴ Adam Vann, "Wind Energy: Offshore Permitting", last modified March 8, 2021, <https://crsreports.congress.gov/product/pdf/R/R40175/15>.

³⁵ Timothy H. Powell, "Revisiting Federalism Concerns in the Offshore Wind Industry in Light of Continued Local Opposition to the Cape Wind Project", *Boston University Law Review* vol. 92 (2012): 2023-2053, <https://www.bu.edu/law/journals-archive/bulr/volume92n4/documents/POWELL.pdf>.

³⁶ *Coastal Zone Management Act of 1972 as amended through Pub. L. No. 109-58, the Energy Policy Act of 2005*. 92nd Cong., 2nd sess.

are more readily definable in state waters and not in the central area of the Sound.”³⁷ Overturning this decision would become increasingly difficult, because of the need to provide evidence that something regarding the resources in the middle of Nantucket Sound had changed between the 1980’s and the 2000’s.

The United States Army Corps of Engineers

Because Cape Wind was going to be located in federal waters, there needed to be federal oversight by some entity. As stated, there was not yet a specified process for offshore wind development in the United States. It was decided that under the Rivers and Harbors Act of 1899, the United States Army Corps of Engineers had the authority regarding Cape Wind’s development.³⁸ On November 20th, 2001, Cape Wind Associates submitted an application to the United States Army Corps of Engineers for the construction of a data tower in Horseshoe Shoal. This tower would gather data on wind speeds in the area to fully determine that Horseshoe Shoal was the proper place for the wind farm.

The following day, they submitted a permit request for the full construction of the 170 wind turbines.³⁹ At the beginning of December 2001, the Army Corps announced that they would begin to consider allowing Cape Wind to build their data tower, and subsequently set January 8th, 2002, as a date for a public hearing. After review, the United States Army Corps of Engineers granted the permit to Cape Wind Associates to allow them to build their data tower. They issued this permit issued under section 10 of River and Harbors Appropriation Act of 1899.⁴⁰ Immediately following the announcement, opponents of Cape Wind scoured through federal laws and regulations to assess

³⁷ Williams and Whitcomb, 73.

³⁸ “Cape Wind Archived | Bureau of Ocean and Energy Management,” *BOEM*, October 2019, <https://www.boem.gov/renewable-energy/studies/cape-wind-archived>.

³⁹ *Alliance to Protect Nantucket Sound v. U.S. Dept. of Army*, No. CIV.A.02-11749-JLT (D. Mass. Sep. 18, 2003).

⁴⁰ *Alliance to Protect Nantucket Sound v. U.S. Dept. of Army*, No. CIV.A.02-11749-JLT (D. Mass. Sep. 18, 2003).

what claims they could bring to court. Two major lawsuits followed this announcement, which will be discussed later in this chapter.

Draft Environmental Impact Statement

Under the National Environmental Policy Act (NEPA) rules, the United States Army Corps of Engineers was required to conduct a full review of all potential environmental impacts, which is known as an Environmental Impact Statement. While Cape Wind Associates were able to construct the data tower with no need for an Environmental Impact Statement (EIS), the same could not be said for the 130 wind turbines they were estimating would be built for the wind farm. Nantucket Sound and the Cape Wind proposal needed to be assessed for potential negative impacts regarding topics like the impact the of drilling to the seabed, which is needed to secure the turbine, would have on its stability. Additionally, the impact that this drilling and new structure would have on the marine life and birds in the area needed to be examined. If the seabed is dramatically changed from the securing of the turbines, it could destroy habitats for many marine creatures. Similarly, the blades have the potential to create deadly hazards for birds flying through the area. Furthermore, because this was the first offshore wind project, it remained unknown if it would impact airways and navigation.

On November 9th, 2004, the Corps released the Draft Environmental Impact Statement (DEIS) that totaled approximately 4,000 pages analyzing every detail of the proposed project.⁴¹ The DEIS predicted that the turbines would kill up to 364 birds per year, a number that was determined would not be hazardous to either endangered species or specific populations of birds that had previously been identified in public discussions. The effects on the fish and shellfish population were found to only be a problem during the construction stage of the project. The DEIS also acknowledged the impact to scenic views in some areas, such as the Kennedy Compound and the

⁴¹ Layzer, 438.

Nantucket Historic District. Despite this, the draft predicted the wind farms would create jobs and generate tourism, and it would yield public health benefits, such as an increase in air quality which would in turn reduce asthma, worth \$53 million.⁴² The release of the DEIS was the biggest win that Cape Wind had seen in its history. A report conducted not by Gordon's own people, but rather the United States government, viewed the Cape Wind farm as having few very negative environmental impacts. After the release of the DEIS, the Corps announced that they would hold three meetings to discuss their findings with the public and take questions and opinions before releasing the finalized Environmental Impact Statement.

Public Reaction to the Draft Environmental Impact Statement

While there may have been a momentary lull in the public sphere regarding debates on the Cape Wind project, that was no longer the case on November 10th. Both Clean Power Now and other advocates for Cape Wind finally felt like they had a bit of the upper hand, whereas the Alliance to Protect Nantucket Sound was ready to fight the results of the DEIS and do whatever they could to delay the project further. The first of these hearings took place on Martha's Vineyard, in a local high school auditorium. Most of the hearing attendees belonged to the Alliance to Protect Nantucket Sound, who were ready to challenge the DEIS. Workers for the Alliance had been hired to hand out water bottles and cupcakes. Others flocked to the sign-up table, jotting down members' names in an attempt to monopolize the speakers to all be members from the Alliance. David McCullough, the well-respected historian, had marched out in anger from the auditorium, shouting as he left, "This is visual pollution!" Congressman William Delahunt significantly went beyond his three minutes allotted for each person to voice the Alliance's opinion on the project. In the first meeting, there was little input from what people would consider "locals."⁴³

⁴² Layzer, 438.

⁴³ Williams and Whitcomb, prologue.

The second meeting did not go much better. The Alliance returned with their cupcakes and “save our sound” buttons, but more importantly the Governor of Massachusetts, Mitt Romney, appeared at the hearing. While he emphasized that Nantucket Sound was a national treasure, an idea that many were expecting to hear, he continued saying, “I’ve seen wind farms. They’re not pretty.” and “There are several areas in the Berkshire region where wind farms have recently been approved for land.” He continued to discuss other coastal areas of Massachusetts where wind farms may be more “appropriate.” This comment drew serious criticism, with the headline “Cape Wind: Too Ugly for the Rich?” running the next day.⁴⁴ After seeing all the stops that the Alliance had pulled out for these public meetings, members of Clean Power Now realized they needed to respond in a spectacular fashion to gain access to the podium and the press. Clean Power Now may not have had the money that the Alliance did, but they certainly did have friends.⁴⁵ At the final hearing at MIT, Clean Power Now had members who decided to dress up in old age yachting costumes, chanting things such as, “Cape Wind makes our Blue Blood Boil! Let’s get our power from Middle East Oil!” Others chanted, “Fighting windmills can’t be that hard! Just keep them out of my backyard!”⁴⁶ Finally getting the chance to let their voices be heard, supporters of Cape Wind were able to voice the various benefits they thought the project would bring them. Gordon noticed in this hearing that non-local attendees who expressed support for the Cape Wind project backed their comments with scientific evidence.⁴⁷

⁴⁴ Williams and Whitcomb, 228.

⁴⁵ Williams and Whitcomb, 230.

⁴⁶ Williams and Whitcomb, 232-233.

⁴⁷ Williams and Whitcomb, 236.

Figure 3: Protestors for Clean Power Now



A group of Clean Power Now protesters dressed as yachters highlight the hypocrisy of the Alliance’s arguments.⁴⁸

The Energy Policy Act of 2005

In August 2005, less than a year after the United States Army Corps of Engineers released their DEIS and grappled with around 5,000 public comments, Congress Passed the Energy Policy Act of 2005. The Energy Policy Act was enacted to create grants, tax incentives, and other initiatives to increase renewable energy in the United States. Regarding offshore wind farms, the Energy Policy Act put one specific agency in charge of the permitting process, in the hopes of reducing confusion.⁴⁹ It also established a mechanism whereby the federal government could charge renewable energy projects a fee for the use of federal waters. However, this did not affect Cape

⁴⁸ Williams and Whitcomb, 233.

⁴⁹ Dominic Spinelli, “Historic Preservation & Offshore Wind Energy: Lessons Learned from the Cape Wind Saga,” *Gonzaga Law Review*, Vol. 46 no. 3 (2011): 741-770, <http://blogs.gonzaga.edu/gulawreview/files/2011/09/Spinelli.pdf>.

Wind, which was “grandfathered in” because they had applied for the permit prior to the new legislation being enacted.⁵⁰ Despite all of this good news for Cape Wind, the Energy Policy Act of 2005 did create some more setbacks. It was determined that instead of the Army Corps, the project would be managed by the Department of the Interior, specifically the Mineral Management Service (MMS). The MMS now had the full authority over issuing leases, easements, or rights-of-way for renewable energy projects. The MMS determined that they would be conducting a new Draft Environmental Impact Statement.⁵¹ Cape Wind Associates could do nothing but wait for the new DEIS to be released.

Troubles in Congress

Just one month after the passage of the Energy Policy Act, a Republican Senator from Alaska and the Transportation and Infrastructure Committee Chair, Don Young, was working on a bill that would reauthorize the operations of the United States Coast Guard. While the bill seemed innocent enough, Young was looking to add a “floor manager’s amendment” that would require the Coast Guard to issue an opinion about whether any proposed offshore wind farm would pose a hazard to navigation.⁵² Although this amendment failed to pass, in December the Senator offered another amendment that would “prohibit the establishment of any offshore wind energy facility within 1.5 nautical miles of a shipping channel or commonly used route for a... ferry system”.⁵³ This applied directly to Cape Wind, as the turbines were set to be situated within 1 mile of a ferry path and within 1,500 feet of a shipping lane.⁵⁴ This move received very bad press, especially from the East Coast, where newspapers furiously attacked the Senator. Even though the bill never passed

⁵⁰ Layzer, 439.

⁵¹ Spinelli, 744.

⁵² Williams and Whitcomb, 250.

⁵³ Williams and Whitcomb, 256.

⁵⁴ Layzer, 439.

with this amendment attached, it made Gordon and other Cape Wind supporters nervous, and with good reason.

In April of 2006, Republican Senator Ted Stevens from Alaska proposed adding language that would allow for state leaders to veto a project if they felt that it would obstruct navigation. Once again, the proposed amendment caused significant criticism and many, including the environmental non-profit Greenpeace and the *Boston Globe*, stated that Stevens was proposing this amendment at the behest of fellow senator Ted Kennedy.⁵⁵ Even more outrage came from the New England area when they heard of this proposition. Television ads of Senator Kennedy funded by Greenpeace were run across New England that showed him hitting wind turbines in Nantucket Sound as if it were a game of whack-a-mole.⁵⁶ Finally in May 2006, after the amendment lost what little support it had in Congress, it seemed that keeping the state veto would jeopardize the passage of the entire bill. As a result, it was dropped and a provision that would give the Coast Guard veto power if they felt there were threats to navigation and public safety, was passed instead. Cape Wind proponents could continue to move on without fear of being shut down and wait for the DEIS report to become public.⁵⁷

State Cooperation

While Cape Wind was facing trouble down in Washington D.C, they had success back home in Massachusetts. Even though the wind turbines themselves would be located entirely in federal waters, the transmission cables that move the harnessed wind power from the site and to the homes of the residents would have to travel through the three miles of state waters, meaning that in addition to the federal permits from the MMS, Cape Wind was also required to obtain permits from the state of Massachusetts. As a result, Cape Wind was subject to review under the Massachusetts

⁵⁵ Layzer, 440.

⁵⁶Williams and Whitcomb, 113.

⁵⁷ Layzer, 440.

Environmental Policy Act (MEPA). Much like the National Environmental Policy Act, the Massachusetts Environmental Policy Act requires its own version of an EIS, known as an Environmental Impact Review (EIR). In addition to an EIR, the project was also required to go through the Cape Cod Commission's process known as the Development of Regional Impact (DRI).⁵⁸ In December of 2006, the Massachusetts State Supreme Court held that the cables to connect Cape Wind to the electrical grid were a viable option and could not be shut down.⁵⁹ This was a significant win for Cape Wind, and so long as they could get a favorable DEIS from the MMS, it seemed as though they would finally be able to begin construction sometime soon.

The Mineral Management Service and Their New Draft Environmental Impact Statement

The Mineral Management Service (MMS) had planned to have the new DEIS out by the end of 2006, but this was not the case. Unsurprisingly, they dealt with a variety of delays that resulted in the DEIS not being released until January 18th of 2008.⁶⁰ Overall, the report seemed generally favorable. However, the Mineral Management Service's DEIS also acknowledged that the turbines would likely create some sort of visual hazard. This was something that Cape Wind Associates had expected to hear. Like the first Draft Environmental Impact Statement conducted by the Army Corps of Engineers, the MMS scheduled several dates for the public to comment on what had occurred. The public comment period for the new DEIS was set for March 2008, and much like the last time, thousands of people turned out to give their opinion on Cape Wind. Clean Power Now had their members turn out in large numbers, with someone even dressing as a polar bear and singing, "All we are saying is give wind a chance!" In addition, the Alliance had decided to join in on the costume game and had "Pirate Jim" who was taking Nantucket Sound from the people "without

⁵⁸ Danielle E. Horgan, "Reconciling the Past with the Future: The Cape Wind Project and the National Historic Preservation Act," *Vermont Law Review* vol. 36 (2011): 409-432, <https://lawreview.vermontlaw.edu/wp-content/uploads/2012/02/16-Horgan-Book-2-Vol.-36.pdf>.

⁵⁹ Layzer, 441.

⁶⁰ Horgan, 411.

paying a dime.”⁶¹ Some families even came from Appalachian West Virginia, where mountaintop removal is the most popular form of mining. The coal that was generated from the mountaintop removal is the same coal that is used in the power plants surrounding Cape Cod. They came to the meetings to beg members of the Cape to “be our heroes” and allow the offshore wind farm to be created so they could have access to clean water. They also begged for the creation of wind farms so they would no longer be at risk of losing their house from mountaintop removal.⁶²

Despite these dramatics, there was significant progress made in this round of public hearings. The MMS learned of new groups that were officially opposing Cape Wind. Fishermen came to the hearing in large numbers, saying that they were worried about the statistics that the DEIS had regarding fish and conch landings in particular.⁶³ Another group that came to the hearings to express their displeasure was the Mashpee and Aquinnah Wampanoag tribes. These tribes were concerned about how the turbines would impact their spiritual practices, because they required an unobstructed view of the sunrise. The tribes claimed that the MMS did not engage in government-to-government consultation in the way they are supposed to under federal law. Because they are Native American Tribes, they have status in the United States as sovereign nations.⁶⁴ After the MMS investigated this claim and updated their DEIS on January 16th, 2009, they released their Final Environmental Impact Statement (FEIS), which indicated that the impacts from Cape Wind were expected to be “negligible.”⁶⁵ The Wampanoag tribes were unhappy with this decision. In October of 2009, they decided to request that the Nantucket Sound be placed on the National Register of Historic Places. After evaluating the request, the National Park Services agreed, and in

⁶¹ Gemmel, 38:00.

⁶² Gemmel, 38:00.

⁶³ Layzer, 444.

⁶⁴ Layzer, 444.

⁶⁵ Horgan, 420.

January of 2010, Cape Wind automatically became subject to more review processes, this time under the National Historic Preservation Act.⁶⁶

The National Historic Preservation Act

The National Historic Preservation Act (NHPA) was created to ensure that federal agencies fully evaluate the impact that a new project could have on a site that is considered historic in some form. The Wampanoag tribes are also known as, “The people of first light,” and they were able to place Nantucket Sound on the National Register of Historic Places by making multiple claims. Not only did they state their spiritual traditions require an uninterrupted view of the sunrise, but they also stated that the shallow sands of Horseshoe Shoals are host to an ancient Native American burial ground. The Wampanoag tribes state that their oral history discusses their ancestors buried in these sands. There was debate regarding the evidence of these claims, as Cape Wind claimed that they had been required to take sediment samples of Horseshoe Shoal years before these claims were made, and there was no evidence of life.⁶⁷ Despite this, the tribes still need the unobstructed view of the sun for sun ceremonies, and the National Park Service agreed to have it listed as a site. The NHPA has various responsibilities, including authorizing new sites to the National Register of Historic Places as well as maintaining old ones, establishing what is known as the Section 106 review process. This results in stewardship obligations to preserve historic sites that are owned by the federal government.⁶⁸

Because of the new placement on the National Register of Historic Places, Nantucket Sound and the Cape Wind project were subject to the Section 106 review process. The Section 106 process has been described by some courts as a “stop, look, and listen” process, as well as the “regulatory

⁶⁶ Spinelli, 747

⁶⁷ Evan Lehmann, “Pioneering Wind Farm Faces Another Delay, this Time Over Indian Sites,” *New York Times*, October 5th, 2009, <https://archive.nytimes.com/www.nytimes.com/cwire/2009/10/05/05climatewire-pioneering-wind-farm-faces-another-delay-thi-73053.html>.

⁶⁸ Spinelli, 750.

heart of the NHPA”.⁶⁹ The Advisory Council on Historic Preservation established a four-step process for Section 106 compliance. Two of these bullets state, [OBJ]

To successfully complete Section 106 review, federal agencies must do the following:

determine how those historic properties might be affected; explore measures to avoid or reduce harm (“adverse effect”) to historic properties; and reach agreement with the SHPO/THPO (and the ACHP in some cases) on such measures to resolve any adverse effects or, failing that, obtain advisory comments from the ACHP, which are sent to the head of the agency.⁷⁰

Almost automatically, Cape Wind satisfied the first two bullet points. Under the NHPA, Cape Wind is considered a federal undertaking because it is encompassed in the definition as, “a project, activity, or program ... under the direct or indirect jurisdiction of a federal agency... and those requiring a federal permit, license or approval”.⁷¹ Similarly, as the Nantucket Sound was just placed on the register, Cape Wind now impacts a property directly on the register. Now under Section 106, the two parties, the Wampanoag tribes, and Cape Wind, were required to meet with the MMS in order to discuss and try to decide on appropriate mitigation efforts.

These meetings did not go smoothly, and there were a total of eight Section 106 meetings between the two groups between January 1st, 2010, and March 1st, 2010.⁷² When March 1st approached with no solution being agreed to by either side, the Department of the Interior Secretary, who oversees the MMS, concluded that the decision would need to instead be made by the head of the agency after receiving comments from the Advisory Council of Historic Preservation. On April 2nd, 2010, the Advisory Council recommended to the Interior Secretary Ken Salazar that the Cape Wind plan be rejected. The council concluded that the impact would be “pervasive, destructive... and permanent” and that the damage at the site “cannot be adequately mitigated.”⁷³

⁶⁹ Dominic Spinelli, 756.

⁷⁰ “Protecting Historic Properties: A Citizen’s Guide to Section 106 Review.” *Advisory Council on Historic Preservation*. April 2016. https://www.achp.gov/sites/default/files/documents/2021-01/CitizenGuide2021_011321.pdf

⁷¹ Dominic Spinelli, 760.

⁷² Spinelli, 760.

⁷³ Layzer, 447.

Despite the recommendation, Salazar decided to issue a positive “record of decision” at the end of April, meaning that the MMS and the Department of the Interior were intending to sign the lease for Cape Wind. In a statement, Salazar said, “I find that the public benefits weigh in favor of approving the Cape Wind project at Horseshoe Shoal.”⁷⁴ Finally, after almost 10 years of waiting, Cape Wind obtained its lease to start construction in Horseshoe Shoal. Towards the end of October of 2010, Secretary Salazar, under the Bureau of Ocean and Energy Management (BOEM), signed a twenty-eight-year lease with Cape Wind Associates.⁷⁵ Predictably, there was backlash from many different groups responding to this news.

Legal Actions Taken

During the 17 Years that the Cape Wind advanced through the regulatory approval process, opponents of the project were able to use the different regulations required by a variety of government agencies discussed above to create legal battles and continuously delay the Cape Wind project. There were legal battles that began in 2003 when the project was first seeking a permit from the Army Corps of Engineers, and others that ended in 2016, just one year before Gordon officially filed for bankruptcy.

The first official legal action taken against Cape Wind was brought by the Ten Taxpayers Citizen Group. They described themselves as a group of citizens who “resides in Barnstable County and has great familiarity with the Horseshoe Shoal and Nantucket Sound, and has economic, as well as environmental interests in preserving the integrity of the seabed, water, and airspace over the said Shoal.”⁷⁶ The Ten Taxpayers claimed that Cape Wind Associates should not be allowed to construct the data tower without approval from the Commonwealth of Massachusetts. As described earlier, Horseshoe Shoal is located approximately five miles from the shore. In the *United States v. Maine*

⁷⁴ Spinelli, 766.

⁷⁵ Layzer, 448.

⁷⁶ Timothy H. Powell, 2035.

Supreme Court case, it was established that not only is the water of the Atlantic Ocean under federal regulation when three miles from the coast, but the seabed is as well. It is also confirmed in these cases that Horseshoe Shoal and the rest of the Nantucket Sound falls under these rules.⁷⁷ This allows for the Cape Wind data tower to be secured to the ocean floor. The Ten Taxpayers Citizens Group cited the 1983 amendment to the Magnuson-Stevens Fishery Conservation and Management Act as a reason that the Commonwealth of Massachusetts has regulatory authority over the entire Nantucket Sound fishery, which includes Horseshoe Shoal. The amendment states,

“For the purposes of this chapter... the jurisdiction and authority of a State shall extend -- (A) to any pocket of waters that is adjacent to the State and totally enclosed by lines delimiting the territorial sea of the United States...; [and] (B) with respect to the body of water commonly known as Nantucket Sound, to the pocket of water west of the seventieth meridian west of Greenwich”.⁷⁸

Under Title 310 of the Code of Massachusetts Regulations, which states that applications for any construction or placement of new structures must get a license from the State, the Ten Taxpayers argued that Cape Wind Associates should not be allowed to construct the data tower without this approval. On August 19th, 2003, the Massachusetts State court disagreed. They explained that the Magnuson Act only delegates authority to the state regarding who may fish, by what means they fish, and how much they may fish. Even though the Ten Taxpayers feel that the data tower may be harmful to the fish, the Magnuson Act does not apply to protection for the fish.⁷⁹

The Alliance to Protect Nantucket Sound also tried to use the court system to prevent the building of the data tower. They argued that the United States Army Corps of Engineers acted unlawfully in issuing a permit for the data tower to Cape Wind. They determined that the United States Army Corps did not have the authority to issue a permit for the data tower because the tower did not involve any extraction of resources from the seabed. The Corps issued a permit to Cape

⁷⁷ *Ten Taxpayers Citizen Group v. Cape Wind Associates*, 278 F. Supp. 2d 98 (D. Mass. 2003)

⁷⁸ *Ten Taxpayers Citizen Group v. Cape Wind Associates*.

⁷⁹ *Ten Taxpayers Citizen Group v. Cape Wind Associates*.

Wind under section 10 of the Rivers and Harbors Appropriation Act of 1899. Section 10 states that “a permit from the... Corps... is required for the installation of any structure in the navigable waters of the United States.”⁸⁰ The term “navigable waters” does not include the seabed where the tower would be secured. However, the Outer Continental Shelf Lands Act (OCSLA) extends the Corps’ section 10 authority to include the outer continental shelf, also known as the seabed.⁸¹

In 1978, there was an amendment to the OCSLA, that stated that the Corps had authority for structures with the purpose of “exploring for, developing, or producing resources therefrom,” meaning that the Corps had authority for structures that were extracting resources.⁸² The Alliance to Protect Nantucket Sound argued that because of this 1978 amendment, the Corps now only had authority for structures related to extracting resources, and therefore the issuance of the permit was unlawful. The court once again sided with Cape Wind and stated that the 1978 amendments were not intended to alter the Corps’ jurisdiction regarding the seabed, rather the purpose was to extend their authority to include a broader reference to “fixed structures.” In addition, the court stated that since Congress amended the OCSLA, the interpretation of the amendment has consistently given the Corps jurisdiction over all installations on the seabed, regardless of their purpose. Congress itself explicitly stated that it had no intention of limiting the authority of the Corps of Engineers with the amendment.⁸³

In addition, the Alliance to Protect Nantucket Sound also argued that the Corps failed to follow its obligations under the National Environmental Policy Act (NEPA). NEPA requires that when construction is going to occur, an Environmental Assessment (EA) is conducted, and the environmental impact is assessed. If there is a Finding of No Significant Impact (FONSI), there is

⁸⁰ *Alliance to Protect Nantucket Sound v. U.S. Dept. of Army.*

⁸¹ *Alliance to Protect Nantucket Sound v. U.S. Dept. of Army.*

⁸² *Alliance to Protect Nantucket Sound v. U.S. Dept. of Army.*

⁸³ *Alliance to Protect Nantucket Sound v. U.S. Dept. of Army*

no requirement for an Environmental Impact Statement (EIS) to be prepared. However, if a FONSI cannot be produced, then an EIS must begin to be drafted.⁸⁴ The Alliance argued that because they did not make the Environmental Assessment and the FONSI public, there was a violation of NEPA. The CEQ states that there are limited circumstances when the agency must make the FONSI public, and one of those circumstances is when the proposed action is without precedent. The Alliance argued that the construction of the data tower in Nantucket Sound constituted “without precedent,” but because it was a temporary structure this was not the case. Similarly, the court concluded that a similar structure was authorized off the coast of Martha’s Vineyard, as well as other similarly-constructed piers along the coast, so the Cape Wind data tower was not unprecedented at all, and therefore they were under no obligation to release the Environmental Assessment and FONSI.⁸⁵ And, as seen earlier, the Army Corps did provide a period for public comment when it first announced they were going to consider Cape Wind. On September 18th, 2003, Cape Wind won their second lawsuit, and the construction of the data tower was allowed to commence.

After the Energy Policy Act of 2005, there was a new agency in charge of Cape Wind and its permitting process. Cape Wind was now under the jurisdiction of the Secretary of the Interior and the Bureau of Ocean and Energy Management (BOEM). In response to the decision by Secretary Salazar and the BOEM to sign the construction lease for Cape Wind and allow them to begin construction of the turbines, many different groups began to file suits against Cape Wind Associates as well as the BOEM as an agency. The two Wampanoag tribes were set to file against Secretary Salazar and the entire BOEM agency. Other groups wanted to file suit as well. The Alliance to Protect Nantucket Sound as well as a group known as Public Employees for

⁸⁴ “National Environmental Protection Act: Section 1501.4.” *United States Congress*.
<https://casetext.com/regulation/code-of-federal-regulations/title-40-protection-of-environment/chapter-v-council-on-environmental-quality/subchapter-a-national-environmental-policy-act-implementing-regulations/part-1501-nepa-and-agency-planning/section-15014-categorical-exclusions>.

⁸⁵ *Alliance to Protect Nantucket Sound v. U.S. Dept. of Army*

Environmental Responsibility intended to sue as well.⁸⁶ On July 6th, 2011, the Wampanoag tribes filed suit in the U.S. District Court for the District of Columbia against the BOEM and Secretary Ken Salazar specifically. The tribe claims that the Section 106 review process was not conducted effectively, because it failed to conduct the meaningful government-to-government consultation with the tribe that is required under Section 106 of the National Historic Preservation Act. They go on to state that the Massachusetts' Office of the State Historical Preservation, the National Park Service, the National Register of Historic Places and the Advisory Council on Historic Preservation were all in agreement that Nantucket Sound deserved a place on the National Register for Historic Places.⁸⁷ They similarly argued that when the Advisory Council on Historic Preservation made their recommendations to Secretary Salazar, they had pointed out that the review process for Cape Wind and the Nantucket Sound was flawed. They included several claims in these comments, such as “Section 106 was initiated late in the review process” as well as that “tribal consultation under Section 106 as conducted by the Corps and by MMS was tentative, inconsistent, and late.”⁸⁸ The tribes argued that this did not constitute “meaningful government-to-government consultation,” and as a result the approval of the Cape Wind farm could not be allowed to continue.

Since there were so many groups and people looking to file against Cape Wind, ultimately the claims that were considered the most legitimate were consolidated into one larger case. The case of the Aquinnah Wampanoag tribe was dropped from this larger case, and as a result their claims against the BOEM and Secretary Salazar were dropped as well. Among the other groups planning to take action against Cape Wind were the Town of Barnstable, Massachusetts, the Alliance to Protect

⁸⁶ *TOWN OF BARNSTABLE, MASSACHUSETTS, ET AL., APPELLEES V. ABIGAIL ROSS HOPPER, ACTING DIRECTOR, U.S. BUREAU OF OCEAN ENERGY MANAGEMENT, ET AL., APPELLEES* No. 14-5301.

⁸⁷ https://infoweb.newsbank.com/apps/news/document-view?p=WORLDNEWS&t=pubname%3AICTON%21Indian%2BCountry%2BToday%2B%2528Oneida%252C%2B%2BNY%2529&sort=YMD_date%3AD&fld-base-0=alltext&maxresults=20&val-base-0=%22Cape%20Wind%22&docref=news/1887FFAAB509D1E0.

⁸⁸ Spinelli, 766

Nantucket Sound, and Public Employees for Environmental Responsibility. In the full case that was sent to the United States Court of Appeals, District of Columbia Circuit, the opponents of the project argued that the government violated various federal statutes, including NEPA, the Shelf Lands Act, NHPA, the Migratory Bird Treaty Act, the Endangered Species Act, and the Coast Guard and Maritime Transportation Act.⁸⁹ In the end, on July 5th, 2016, the Court ruled that the Bureau and Cape Wind violated NEPA and the Endangered Species Act.

The plaintiffs argued that BOEM did not obtain “sufficient site-specific data on seafloor and subsurface hazards” for Nantucket Sound. Because of that, it was argued that this violated NEPA. In previous court decisions, the rulings provided that agencies “must take a ‘hard look’ at the environmental consequences.” According to the plaintiffs, the Bureau’s 2009 FEIS was arbitrary and capricious because the seafloor hazards were not assessed adequately.⁹⁰ They cite evidence in the form of emails between the BOEM’s geologist, Richard Clingan, and the BOEM’s Cape Wind project manager, Rodney Cluck. In these emails, Clingan states that “[t]here is no indication that [Cape Wind] ha[s] adequate data to address” various geological hazards, and that Cape Wind's surveys “don't seem to conform (even loosely) to the ‘Guidance Notes on Site Investigations for Offshore Renewable Energy Projects,’” This evidence was damning for Cape Wind and the Bureau. As a result, the Court ruled that before Cape Wind could begin construction on the turbines, they must supplement the FEIS with adequate geological surveys.⁹¹

⁸⁹ *Public Employees for Environmental Responsibility, et al., Appellants Town of Barnstable, Massachusetts, et al., Appellees v. Abigail Ross Hopper, Acting Director, U.S. Bureau of Ocean Energy Management, et al., Appellees*, No. 14-5301.

⁹⁰ *Public Employees for Environmental Responsibility, et al., Appellants Town of Barnstable, Massachusetts, et al., Appellees v. Abigail Ross Hopper, Acting Director, U.S. Bureau of Ocean Energy Management, et al., Appellees*, No. 14-5301.

⁹¹ *Public Employees for Environmental Responsibility, et al., Appellants Town of Barnstable, Massachusetts, et al., Appellees v. Abigail Ross Hopper, Acting Director, U.S. Bureau of Ocean Energy Management, et al., Appellees*, No. 14-5301

Regarding the Endangered Species Act, the plaintiffs argued that it was the Fish and Wildlife Service that violated it. In their original draft statement to Cape Wind and the Bureau, the Fish and Wildlife Service stated that the turbines would pose potential threats to two endangered species: the roseate tern and the piping plover. To attempt to mitigate these damages, the Fish and Wildlife Service stated that during times of poor visibility, the turbines could be turned off to reduce the risk of collisions between these birds and the turbines.⁹² Cape Wind and the Bureau objected to this recommendation because it would cause the turbines to be off for too many days of the year, so they requested that the recommendation for turning off the turbines be deleted. The Fish and Wildlife Services complied with this request. Because the Fish and Wildlife Service failed to make an “independent determination” about the impacts that Cape Wind would have on the species of Nantucket Sound, they were found to be in violation of the Endangered Species Act.⁹³ Despite this decision, the courts understood that the value of the renewable energy source was so great, that despite these missteps, so long as the BOEM and Cape Wind revised the Final Environmental Impact Statement, the project would be allowed to be built. Similarly, because the Fish and Wildlife service stated that there would only be “potential” risk to the two endangered species, it was decided that benefits outweigh the potential risks. After determining these parameters, the BOEM and Cape Wind had their signed lease allowing them to finally begin the construction of the turbines. The elite members of society who lived on the Cape were funding these court cases that essentially halted construction of Cape Wind for six years, causing the company millions of dollars without any construction of the wind farms having been completed.

⁹² *Public Employees for Environmental Responsibility, et al., Appellants Town of Barnstable, Massachusetts, et al., Appellees v. Abigail Ross Hopper, Acting Director, U.S. Bureau of Ocean Energy Management, et al., Appellees*, No. 14-5301

⁹³ *Public Employees for Environmental Responsibility, et al., Appellants Town of Barnstable, Massachusetts, et al., Appellees v. Abigail Ross Hopper, Acting Director, U.S. Bureau of Ocean Energy Management, et al., Appellees*, No. 14-5301

The End of Cape Wind

Because the court cases against Cape Wind were originally filed in 2011 and 2012 and the case was not decided until mid-2016, Cape Wind was not allowed to begin construction until the cases were decided. When Cape Wind received their lease signed from the BOEM, they also signed contracts with both National Grid and NStar stating that they would begin construction of the turbines by the end of 2014. Because they were still tied up in their court case, the construction did not take place. So, in January of 2015, when no turbines had been built and no construction had started, both companies terminated their contracts with Cape Wind.⁹⁴ This was the beginning of the end for Cape Wind. In February of 2015, Cape Wind requested a two-year suspension of the operations terms of its lease with BOEM.⁹⁵ After the court case had been decided in July of 2016, Cape Wind once again needed to wait before beginning construction. This time, they needed the FEIS supplement regarding the geological survey of the seafloor to be completed. In June of 2017, Cape Wind submitted a request for another two-year suspension of the operations terms as well as a suspension of their payment requirements.⁹⁶ After waiting for one year, in July of 2017 the BOEM had released the report saying that after additional testing,

“The geology of the affected environment of the Cape Wind Project area has not changed for this Final SEIS. Additional geotechnical information reported as part of the revisions to the COP, FDR, and FIR confirmed that the original survey information was valid, and the foundation design and installation methods proposed were appropriate.”⁹⁷

⁹⁴ Layzer, 449.

⁹⁵ “Cape Wind Archived | Bureau of Ocean and Energy Management,” *BOEM*, October 2019, <https://www.boem.gov/renewable-energy/studies/cape-wind-archived>.

⁹⁶ “Cape Wind Archived | Bureau of Ocean and Energy Management,” *BOEM*, October 2019, <https://www.boem.gov/renewable-energy/studies/cape-wind-archived>

⁹⁷ “Cape Wind Archived | Bureau of Ocean and Energy Management,” *BOEM*

Despite this good news, Cape Wind no longer had the funds to complete the project. From the beginning, Jim Gordon had very few investors, and they had all pulled out after January of 2015, when Cape Wind failed to begin building by the deadline of December 31st, 2014.

On December 19th, 2017, Jim Gordon announced that after 16 years of fighting to get offshore wind power off the coast of the Cape, he was officially “pulling the plug” on Cape Wind. Over the course of those 16 years, Gordon had spent over \$100 million of his own money. In an interview with the *New York Times*, Gordon stated, “In my wildest imagination, I never envisioned just how exhaustive, how time consuming and how expensive this would be.”⁹⁸ Cape Wind had 16 years of endless legal battles, regulation delays, and public discourse. Its extensive timeline confirms that there were battles to defeat Cape Wind since it was announced in August of 2001, and the same month a well-funded opposition group was created with the sole purpose of destroying it.

The following chapter will discuss the public opinion regarding the favorability of Cape Wind, and how this opinion evolved over time. In addition, there will be an examination of the Cape Wind project gaining national attention through op-eds in well-known papers such as the *New York Times*.

⁹⁸ Seelye, Katharine Q. “After 16 Years, Hopes for Cape Wind Farm Float Away.” *New York Times*, December 19th, 2017. <https://www.nytimes.com/2017/12/19/us/offshore-cape-wind-farm.html>.

Chapter 3: The Evolution of Public Opinion

Introduction:

“If Nantucket Sound becomes an industrial, electrical generation area, then it’s no longer the national treasure that people feel it is. We look at this as our wilderness, our national park.”⁹⁹ This was the reaction of some residents of the Cape when they first heard of the Cape Wind Proposal. As the project progressed and more information was made available, the opinion of the public began to shift more toward acceptance of the turbines and the associated decrease in energy costs that they would bring as well as the benefits for the environment. Regardless, there were still many citizens who remained adamantly opposed to the project until the day it was canceled. This chapter summarizes the evolution of public opinion regarding the construction of Cape Wind from its proposal in August 2001 to its cancellation in December of 2017. The chapter will not focus on wealthy elites who donated thousands of dollars to the Alliance to Protect Nantucket Sound, or even Clean Power Now. The opinions to be discussed in this chapter come from average citizens of Cape Cod and the greater state of Massachusetts.

The First Years

As detailed in previous chapters, when Jim Gordon announced his plan to place wind turbines in the middle of the Nantucket Sound, there was immediate backlash, and the Alliance to Protect Nantucket Sound was formed. They automatically had several thousand dollars that could be put to immediate use from donors such as Pulitzer Prize winner David McCullough, William Koch of Koch Industries, and other notable donors mentioned in Chapter 1. The most pressing issue for the Alliance was to draw public support away from the idea of a new renewable energy site, and toward their cause of delaying the project until its cancellation. This was accomplished by creating lawn signs and an infomercial about the potential impacts of Cape Wind that would be played

⁹⁹ Layzer, 430.

across Massachusetts. The advertisement called Nantucket Sound a “163-square-mile sanctuary” despite the fact that the Sound had been denied sanctuary status. It also showed whales diving through waters made to look like Nantucket Sound even though whales had not been frequenting the Sound for decades at that point.¹⁰⁰

Figure 4: A Lawn Sign Created by the Alliance to Protect Nantucket Sound



These lawn signs were provided by the Alliance for free to the public¹⁰¹

In addition to the idea of the marine sanctuary being disrupted, another worry that pitted the people of Massachusetts against the idea of Cape Wind was the safety of the birds. A 2001 study conducted by the Fish and Wildlife Services found that over 20% of Americans, 46 million, considered themselves to be bird watchers.¹⁰² In early 2002, the idea of “save the birds” became a rallying cry for those against the wind farm, and Gordon was framed as a villain whose project was going to ruin not only a national pastime, but also an important tourist attraction of the Cape, as it is

¹⁰⁰ Williams and Whitcomb, 145.

¹⁰¹ William Kempton et al., 126.

¹⁰² Williams and Whitcomb, 78.

a well-known spot of seashore bird watching.¹⁰³ Members of the Massachusetts Audubon Society raised concerns at a 2002 public hearing regarding the safety of the birds. Jack Clarke is the director of advocacy for the Massachusetts Audubon society, and he described a situation in Altamont, California, where many birds were dying as a result of collisions with wind turbines. He stated, “Altamont illustrated that if large numbers of turbines are placed in an area where there are many birds, birds will collide with the turbines.”¹⁰⁴ He was particularly concerned with the endangered birds who resided in the Cape, particularly the Roseate Tern and the Piping Plover. After listening to these concerns, Gordon hired a variety of leaders in the field to conduct further research on the impacts that the wind turbines would have on the wildlife in the Nantucket Sound, as well as the government-funded Environmental Impact Statement (EIS) that would be released in 2004.

After the Draft Environmental Impact Statement was released in early November of 2004, the Army Corps held a public hearing in December to hear the views of the public. Between the first article released about Cape Wind in 2001 and the Army Corps hearing in 2005, the public had years to solidify their opinions and develop strategies either in support or opposition to the project. Both Clean Power Now and the Alliance to Protect Nantucket Sound had members who were committed to the cause, and both of them were present at the Army Corps meeting. An article in the *Cape Cod Times* summarized the debate stating that well over 1,000 people were in attendance, including Governor Mitt Romney. There were 300 people who had signed up to speak at the debate, but not all got the chance, due to the volume. According to the *Cape Cod Times*, out of the total number of people to speak at the debate, the majority of them were opposed to the project. Despite this, there

¹⁰³ Williams and Whitcomb, 79.

¹⁰⁴ The Cape Cod Times, “Editorials: Wrong Place for a Wind Farm,” *Cape Cod Times*, January 20th, 2002, <https://infoweb-newsbank-com.ezproxy.trincoll.edu/apps/news/document-view?p=WORLDNEWS&docref=news/0F6ABC4B47764F17>.

were equal numbers of supporter and opponents in attendance.¹⁰⁵ Those who spoke brought up a wide variety of topics. Many raised concerns about potential oil spills into the Sound during the construction period of the wind farm. There were also the well-known concerns about the impact of the turbines on both the view and the many varieties of wildlife that live in the Nantucket Sound. However, as the Army Corps stated in its DEIS, these impacts were found to be negligible.¹⁰⁶ Proponents of the wind farm made their feelings about the concerns of the view well-known. One supporter even created a song that highlighted the importance of wind energy and also created the image that worrying about the impact on the view was self-centered.¹⁰⁷

After this first hearing, tensions surrounding the Cape Wind project increased significantly. People began to seriously start submitting their ideas to various local and regional newspapers to get their voices heard and try to shape the debate. One columnist from the *Boston Globe* wrote an op-ed in which she attacked Mitt Romney and others who owned property on the coastline and were opposed to the project. She continued to discuss what she viewed as the tentative plan of increasing funding against Cape Wind in order to ensure that the turbines are not successfully constructed in Nantucket Sound. She paints these views in a negative light and states that the only reason these members of society have opposition to the wind farm are not because of the damage that it would inflict on the environment or even the economic impact it could have on people such as local fishermen. Rather, she states that the wind farm upsets the views from their mansions, which is why they are upset.¹⁰⁸

After the Energy Policy Act of 2005

¹⁰⁵ John Leaning, "People Pack Wind Farm Forum in Yarmouth," *Cape Cod Times*, December 8, 2004, <https://infoweb-newsbank-com.ezproxy.trincoll.edu/apps/news/document-view?p=WORLDNEWS&docref=news/1072689A1E921F85>.

¹⁰⁶ Leaning "People Pack Wind Farm Forum in Yarmouth".

¹⁰⁷ Leaning.

¹⁰⁸ Joan Vennoch, "Cape Wind: Too Ugly for the Rich?," *Boston Globe*, December 14, 2004, http://archive.boston.com/news/globe/editorial_opinion/oped/articles/2004/12/14/cape_wind_too_ugly_for_the_rich/.

After the Draft Environmental Impact Statement hearings, The United States Army Corps of Engineers decided that Cape Wind would move forward, and a more detailed EIS was going to be released at a later date. However, as previously discussed, in August of 2005, the Energy Policy Act was signed, and the responsibility of presiding over the Cape Wind project now fell to the Department of the Interior, specifically the Mineral Management Service (MMS). The MMS determined that they wanted to conduct their own EIS, which would be much more detailed than its predecessor. This new EIS would not be released until January of 2008. In the three years between the release of the original Draft Environmental Impact Statement and the new Environmental Impact Statement by the MMS, there was a significant shift in the public opinion that favored the approval of Cape Wind.

Throughout the history of the project, both Cape Wind and the Alliance to Protect Nantucket Sound had conducted their own surveys on the project, in an attempt to use the statistics to boost their position and try to convince the general public. However, in February of 2004, approximately one month after the public hearings, the *Cape Cod Times* and WCAI Radio conducted a random phone survey of 588 voters from Cape Cod, Nantucket Island, and Martha's Vineyard regarding Cape Wind. This survey was the most objective of the time because it was conducted by news organizations. In February 2004, *The Cape Cod Times* and WCAI radio station surveyed 588 voters from Cape Cod, Nantucket Island and Martha's Vineyard. The survey asked respondents whether they "favor or oppose the "Cape Wind" project to construct windmills on Nantucket Sound." Of those who responded, 44% stated that they were in favor, 21% were opposed, 20% declined to answer, and 16% were undecided.¹⁰⁹ In additions to surveys, there were also interviews conducted where residents of Massachusetts were asked their views on Cape Wind, and the responses were

¹⁰⁹ Willett Kempton, Jeremy Firestone, Jonathan Lilley, Tracy Rouleau & Phillip Whitaker (2005) *The Offshore Wind Power Debate: Views from Cape Cod*, Coastal Management, 33:2, 128, DOI: [10.1080/08920750590917530](https://doi.org/10.1080/08920750590917530).

enlightening, as they showed what the general public was concerned with. The surveys revealed that sometimes the issues that groups such as the Alliance to Protect Nantucket Sound raised were not in line with the issues that a majority of the population identified as most important. For example, many locals were concerned with what the wind farm was going to do to their ability to fish in Nantucket Sound, especially because fishing was the livelihood of so many people.¹¹⁰ This concern was not included in the Alliance to Protect Nantucket Sounds main argument, as those who are fishermen are not in the economic position to donate thousands of dollars to the cause. Besides reducing pollution, one concept that was continually discussed among respondents who were in favor of Cape Wind was decreasing the U.S dependence on foreign oil, especially because the Cape Wind debate was taking place in the years directly after 9/11. One respondent stated,

“I see a need for all kinds of alternative energy sources. One of the reasons my son’s over there in Iraq currently is basically because of oil. They can say what they will about it but, one of our concerns about over there is that if we don’t control it, [pause] we just don’t want to lose it. That’s basically one of the reasons that we’re there. Alternate sources of energy to me are something that’s really critical. (CP9)”¹¹¹

Responses such as these highlight concerns that aren’t always considered by the media when reporting on the topic.

In a survey that was conducted by the Civil Society Institute in 2007, results revealed that of the 501 adults surveyed, 61% of the residents of the Cape and the surrounding islands supported the construction of Cape Wind.¹¹² It is important to examine such a dramatic shift in public opinion over just three years. It is noteworthy that one op-ed that was written by Robert F. Kennedy Jr had a considerable impact on public opinion. On December 16th, 2005, just a few days after the public hearings about the Draft Environmental Impact Statement from the Army Corps, the article “An Ill

¹¹⁰ Kempton, Firestone, Lilley, Rouleau & Whitaker,131.

¹¹¹ Kempton, Firestone, Lilley, Rouleau & Whitaker,139.

¹¹² Civil Society Institute, “Cape Wind: What Cape Cod/ Island Residents Think,” Civil Society Institute, October 25, 2007, <http://www.civilsocietyinstitute.org/reports/10250%20CSI%20Cape%20Wind%20survey%20FINAL.pdf>.

Wind Off Cape Cod” was printed in the *New York Times*. While the Cape Wind project had been in the news in Massachusetts and greater New England for a few years, this was the first time that many beyond this region first heard of Cape Wind and the concept of an offshore wind farm in the United States. Having a liberal member of the Kennedy family complain about the wind farms in such a public manner translated into good news for Cape Wind Associates, but detrimental to the Alliance to Protect Nantucket Sound. Kennedy begins his article by stating that he is not against wind power so long as it is in the right area. From there, he attacks every possible component of a wind farm, regardless of where they are placed. He states that the turbines pose a danger to birds who fly overhead, and that the construction of the wind farm would ultimately be detrimental to sea life. This particular argument undermines his initial statement saying he is supportive of offshore wind in general. Regardless of where an offshore wind farm is sited, there will always be a potential impact to sea life.¹¹³ Since Kennedy, a self-proclaimed environmentalist, now criticized a powerful form of renewable energy, his ideas were not well received. People immediately began attacking his position, stating that the only reason he opposed the project is because the Kennedy estate was located on the coast of Cape Cod and he and his family sailed in the Sound.

After reading Kennedy’s op-ed, grassroots environmentalists across college campuses as well as groups such as Greenpeace USA, the Sierra Student Coalition, and the Chesapeake Climate Action Network signed a letter addressed to Kennedy urging him to reconsider his position on Cape Wind.¹¹⁴ There were others who had a problem with the way Kennedy made the argument that the view off the coast of Cape Cod was more valuable than other areas. One Cape Cod letter writer, described Kennedy’s piece as a “stab in the eye of environmental justice” because he suggested

¹¹³ Robert F. Kennedy Jr., “An Ill Wind Off Cape Cod,” *New York Times*, December 16, 2005, <https://www.nytimes.com/2005/12/16/opinion/an-ill-wind-off-cape-cod.html>.

¹¹⁴ Codder, The Cape, “Letter: Saving Environment Means Tradeoffs.” *Cape Codder, The (Orleans, MA)*, January 20, 2006, *NewsBank*, <https://infoweb-newsbank-com.ezproxy.trincoll.edu/apps/news/document-view?p=WORLDNEWS&docref=news/125B97B337EFA038>.

that the wind farm should block someone else's view.¹¹⁵ The Environmental Protection Agency defines environmental justice as “the fair treatment... of all people regardless of race, color, national origin, or income with respect to... environmental laws, regulations, and policies.”¹¹⁶ By suggesting that Nantucket Sound was the wrong place for a wind farm because it would mar the view and the idea that it should be placed instead in a less exclusive location goes against the principles of environmental justice, which Kennedy claimed to support.

Other members of the public used op-ed space in local papers to fact-check some of the claims that Kennedy made against Cape Wind in his *New York Times* article. One author of a letter to the editor entitled, “Give me a Break, RFK Jr.,” tells people to simply look at the Draft Environmental Impact Statement as it refutes many of his points. He uses the DEIS to refute Kennedy's concerns about the impact on the birds as well as concerns about the toxicity of the oil stored in the turbines. The letter states,

“I believe Kennedy knows all of this, but does not like the idea of seeing a wind farm, in clear weather visible a half inch above the horizon, occupying a bit of his view from the Kennedy Compound. Property values near other offshore wind farms have increased; so has tourism. I cannot imagine what he is worried about, unless it is the likelihood of fewer campaign contributions from others with waterfront property on the Sound.”¹¹⁷

One community member who responded to Kennedy's article discussed the specific argument he made that the noise from the turbines would be heard onshore. The author of this letter to the editor, Charles Komanoff, had spent time in upstate New York measuring the noise that comes from wind turbines, and stated that the windmills located offshore would register at less than 30 decibels. In fact, 30 decibels is the equivalent of the sound of a whisper from 40 feet away. This sound would be

¹¹⁵ Chuck Kleekamp, "All Ocean Views are Valuable: Guest Commentary," *The Register (Yarmouthport, MA)*, January 12, 2006: 015, *NewsBank: Access World News – Historical and Current*, <https://infoweb-newsbank-com.ezproxy.trincoll.edu>.

¹¹⁶ Environmental Protection Agency, “Learn About Environmental Justice,” *EPA*, September 6th, 2022, <https://www.epa.gov/environmentaljustice/learn-about-environmental-justice>.

¹¹⁷ Lesley Miller, "Letter: Give Me a Break, RFK Jr.," *Register, The (Yarmouthport, MA)*, January 19, 2006, *NewsBank: Access World News – Historical and Current*, <https://infoweb-newsbank-com.ezproxy.trincoll.edu/apps/news/document-view?p=WORLDNEWS&docref=news/125B9654C4129A40>.

masked on land anyway with the sound of the wind coming off of the beach. Komanoff also argued that despite what Kennedy said about a negative impact on the marine environment, it is more likely that the clean energy generated by the turbines would aid in the preservation of the marine environment, because Cape Wind was projected to displace over two million barrels a year of oil, the equivalent of 10 Exxon Valdez spills.¹¹⁸

Likewise, when residents of Massachusetts heard of Senator Ted Stevens' amendment to a bill in the Senate that would give the Massachusetts governor Mitt Romney the ability to veto the Cape Wind project, they took to the newspapers to express their discontent. In a letter to the editor, one person mentioned how Cape Wind is largely favored by the residents of Massachusetts, as well as the fact that they have been complying with all of the regulations and reviews that have been required. He continues that allowing Mitt Romney to veto the project would undermine the state, federal, and local legislative processes that had been working together to determine the viability of Cape Wind.¹¹⁹

After Robert F. Kennedy Jr. wrote about his opposition to the Cape Wind project, the proposed wind farm gained major national attention. Soon many who opposed the wind farm received the "NIMBY" nickname. "NIMBY" stands for "Not In My Backyard." Newscasters across the country discussed Cape Wind and how the rich elite who lived on the coast were opposed to the project because it marred their views, despite the fact that the turbines would only be half an inch above the horizon on a clear day. In 2007, *The Daily Show* with Jon Stewart traveled to Cape Cod to film a comedy special about the opposition to Cape Wind. In a satire bit where he discussed Cape

¹¹⁸Charles Komanoff, "Letter: Kennedy Attack 'Myopic'," *Register, The (Yarmouthport, MA)*, January 19, 2006, *NewsBank: Access World News – Historical and Current*, <https://infoweb-newsbank-com.ezproxy.trincoll.edu/apps/news/document-view?p=WORLDNEWS&docref=news/125B9654C4129A40>

¹¹⁹"LETTERS & OPINIONS." *Register, The (Yarmouthport, MA)*, May 18, 2006: 017. *NewsBank: Access World News – Historical and Current*. <https://infoweb-newsbank-com.ezproxy.trincoll.edu/apps/news/document-view?p=WORLDNEWS&docref=news/11EEF8A1EA82E770>.

Wind, he spoke with Alliance to Protect Nantucket Sound spokeswoman Audra Parker. When she stated that there were studies done showing that the construction of the turbines would have a negative impact on property values, he replied with, “Absolutely. I mean would you pay \$3.8 million for the waterfront view with those things? I mean \$3.6 million, maybe, but not \$3.8 million.”¹²⁰ The routine continues when he gets shown a visual simulation of the view from the beach with the turbines on the horizon. Originally, they are so small he can’t see them, but then when she points them out, he starts overreacting saying, “Oh dear god! Jesus! I wish I hadn’t seen that. You know, sometimes as a journalist, there’s things that you have to show the world, that you wish you hadn’t seen yourself.” He then continues to get choked up and says, “Let’s cut the cameras, guys.”¹²¹ This piece gained a lot of attention not only in the press but also online the wider public became aware of the controversy.

The New Draft Environmental Impact Statement

On January 18th, 2008, the Mineral Management Service (MMS) released their Draft Environmental Impact Statement (DEIS), announcing that they would hold hearings in March of the same year. By this time, it had been over three years since the last public meeting regarding Cape Wind construction. The supporters of Cape Wind gained followers and momentum, but those against Cape Wind like the Egan family, who were prominent members of the Republican Party in Massachusetts, and William Koch, whose father had founded Koch Industries, which is an oil company, had increased their donations.¹²² The March hearing was volatile, with both sides geared up for a fight. Even though this public meeting was discussed briefly in the previous chapter, this

¹²⁰ Stewart, John. *The Daily Show with Jon Stewart*. Season 12, “Jason Jones 180: Nantucket. Aired August 7, 2007. <https://www.cc.com/video/nmuqcf/the-daily-show-with-jon-stewart-jason-jones-180-nantucket>, 1:50-1:58.

¹²¹ Stewart, John. *The Daily Show with Jon Stewart*, 2:16-2:30.

¹²² Williams and Whitcomb, 246.

analysis will go into deeper detail regarding the presentations by both supporters and opponents of the project.

The auditorium was packed for this meeting, with a line out the door to get into the building. Despite the chilly January air, people were willing to wait to ensure that they would be able to have their voices heard and hear what others were saying as well. Many who were waiting to be admitted into the building had their own signs and buttons showing either their support or distaste for the Cape Wind project. Members who supported Cape Wind's construction dressed up in traditional yachters outfits and stated that they were against Cape Wind because it was going to "diminish their net worth," as a way to make fun of those opposed. Another group of demonstrators even brought a row boat as part of their demonstration against the construction of the turbines.¹²³ Once the hearing began, there was a lot of conversation from young adults regarding the issue of climate change and how Cape Wind was a project that would be able to save their future, especially since a large proportion of the opponents to Cape Wind were over the age of 50.¹²⁴ Each side of the debate had their share of creative presentations. One member of the group Wind Stop created a song, "Save Our Sound" that discussed their distaste with the idea that a private company had the ability to place their project in the middle of what they felt to be their local land, despite the fact that the portion of land where Cape Wind would be located belongs to the federal government.¹²⁵ Conversely, a proponent of Cape Wind created a "Song Against the NIMBY's." One of their lyrics goes, "It's not as if we're anti-wind farm, to say that would be unfair, We support all clean air options, Just don't build them over there."¹²⁶ This was used to satirize the trivial argument of those who were against

¹²³ Gemmel, 35:50.

¹²⁴ Gemmel, 37:39.

¹²⁵ Gemmel, 40:03.

¹²⁶ The Register, "The windmills that we mind," *Register, The (Yarmouthport, MA)*, November 10, 2005, *NewsBank: Access World News – Historical and Current*. <https://infoweb-newsbank-com.ezproxy.trincoll.edu/apps/news/document-view?p=WORLDNEWS&docref=news/125B964F5F8AB118>.

the wind farm because of the fact that they were building it in Nantucket Sound where the “pristine view” would be impacted.

At the hearing, Rodney Cluck, who was the federal project manager from the MMS for Cape Wind, when talking about the project, stated, “It really is a social phenomenon, I’ve never seen anything like it.”¹²⁷ One member of the Alliance to Protect Nantucket Sound discussed his frustration with the government, stating that they present research and reports regarding the negative impacts of Cape Wind, but they never end up in the final reports that the MMS gives.¹²⁸ Given the Draft Environmental Impact Statement that the MMS released, it is likely that they either already had this data and information and deemed those detriments to be negligible, or the reports and data that were presented to them by the Alliance, were deemed to not be peer-reviewed or credible.

While there were many people at the hearing expressing outrage at the fact that Cape Wind was being permitted to continue to the next step in the regulation process, there were others who were outraged at the fact that it is taking this long for Cape Wind to be approved at all. One resident of Cape Cod at the meeting expressed this stating, “We live in a country where nuclear power gets approved faster than wind? This project has been in the works for over 7 years! That’s ridiculous!”¹²⁹ Other supporters of Cape Wind pointed out that Cape Cod has a long history of windmills dating back to when the Dutch and English settled in New England, and as a result, windmills are seen across Cape Cod. Others pointed out the irony in the fact that the Cape continues to be overdeveloped with forests being destroyed to make space for strip malls, so why is it such a big deal that the construction of something as beneficial as clean energy is being proposed? They answer the question themselves, stating that it is because this new construction is in a place where

¹²⁷Gemmel, 37:00.

¹²⁸ Gemmel, 38:00.

¹²⁹Gemmel, 40:47.

the wealthy would be able to view it, albeit viewing meaning see it approximately half an inch over the horizon.¹³⁰ One woman pointed out the hypocrisy of the Alliance to Protect Nantucket Sound's claim that they were fighting to keep the sound "pristine" by discussing the issue of the ferries that run through Nantucket Sound dumping their untreated waste into the sound without any consequences. She states that if they were truly worried about the Sound, that is where their focus would be.¹³¹ One of the last people to speak at this meeting was a group from West Virginia who live in the Appalachian Mountains. The speaker described the impact that mining for coal in the mountains has had on their drinking water. They brought pictures of their brown water to the meetings showing that the coal that was being shipped to Massachusetts to power the state was having a detrimental impact on them. They urged those against Cape Wind to change their opinions and use their privilege of having a renewable energy source near them to help others who may not be so lucky.¹³² Since the meetings were just public hearings for citizens to present their concerns or support to the MMS, no specific actions followed this expression of public opinion, because there was no evidence from the public that additional research was needed into the impacts of Cape Wind.

Indeed, after the 2008 public hearing, and the litigation that followed, which was previously discussed in chapter 2, there were no more public gatherings for people on both sides to share their opinions. Nevertheless, surveys of public opinion about Cape Wind continued to be taken. For example, in a public opinion analysis, survey samples from 2004 and 2009 were compared. It was found that after the public hearings in 2008, there was a better understanding about the impacts that

¹³⁰ Gemmel, 41:30.

¹³¹ Gemmel, 43:00.

¹³² Gemmel, 46:00.

Cape Wind will have. As a result, the analysis found that,¹³³ One statistic that is especially important to note is that respondent's views about the negative impact on the aesthetics of the ocean view decreased significantly. In 2005, 72% of respondents listed that as a concern, compared to 2009, where only 57% of respondents felt they held the same concern. Similarly, overall support for Cape Wind increased from 36% in 2005 to 57% by 2009. By the conclusion of Cape Wind in 2017, there was overwhelming support for the construction of the turbines. Yet despite this, construction never occurred. It is important to understand how elite members of society not only framed the issue of Cape Wind in a way that is more favorable to their cause, but also analyze the power that elites possess in the realm of public policy. Generally, public policy acts against the will of the majority, and the wealthy "win" in that their interests are the ones that are heard and addressed in policy. This can be seen with Cape Wind. The select few who were against the project were successful in stopping its construction in a variety of ways, which will be discussed in the next chapter.

¹³³ Jeremy Firestone, Willett Kempton, Meredith Blaydes Lilley & Kateryna Samoteskul (2012) Public acceptance of offshore wind power across regions and through time, *Journal of Environmental Planning and Management*, 55:10, 1369-1386, DOI: 10.1080/09640568.2012.682782.

Chapter 4: Elite Influence Over Environmental Policy

Introduction

As seen with the Cape Wind project, elite members of society were able to effectively delay and thwart the implementation of projects that they deem to be unacceptable. However, Cape Wind is not the only instance where this has occurred. The ability of elites to prevent policies or projects favored by the public from going forward is common in the area of environmental policy. Given their resources, those opposed to Cape Wind were able to launch and sustain a campaign that framed the issue to their advantage, resulting in the failure to construct the wind farm. As discussed in the previous chapter, the elites who were against Cape Wind only had a majority-level of support for the first few years. They achieved this support by successfully framing the issue of Cape Wind not in terms of decreasing property values or ocean views. Rather, they emphasized the need to protect the ecosystem of Nantucket Sound, falsely claiming that the introduction of the turbines into the ecosystem would cause damage. Around 2005-2006 when the first Draft Environmental Impact Statement came out and the public learned that scientists stated that the damage to the environment would be negligible, the elite opponents of Cape Wind lost the support of the general public.

After losing this support, the elites realized that they now needed to rely solely on their financial influence and began initiating litigation at every step of the regulatory process, as discussed earlier. This process is not something that is unique to the struggle of Cape Wind, but rather it is something that is relatively common with environmental policy in the United States. There is a large coalition within elite circles that have ties to the fossil fuel industry and other invested parties. As previously discussed, this was also the case with Cape Wind. For example, Douglas Yearly was the head of the Alliance to Protect Nantucket Sound at its beginnings in the early 2000s, and he was known as the CEO of Phelps Dodge Corporation, which had led the country in the incredibly harmful practice of open-pit mining. Additionally, Yearly also sat on the board of directors for

Marathon Oil Corporation, which at the time was building a liquefied natural gas facility in Equatorial Guinea.¹³⁴ Cape Wind is one example showcasing how elites are able to manipulate environmental policy to benefit them and their agenda. When there is no opposition from elites and general public support for an environmental project, it is more likely to be approved, which can be evidenced by the fact that after the cancellation of Cape Wind, there are two currently operational offshore wind farms in the United States, one off of Block Island, and another off the coast of Virginia. In addition, there are a variety of proposed offshore wind projects along the east coast, with some already beginning to lay transmission cables, like the South Fork Wind Farm off the coast of Long Island.¹³⁵ The following chapter will discuss the application of framing to the Cape Wind project as well as examine different environmental projects that have followed the same phenomenon versus those that have not, as well as the Koch family and their influence on policy.

The Alliance to Protect Nantucket Sound and Framing

In order to discuss how the Alliance to Protect Nantucket Sound framed the negative impact of the Cape Wind farm, there must first be a discussion about what is considered framing and how framing works. There are a variety of scholarly theories regarding issue framing and how elites are able to further their agendas. Professor James Druckerman states that framing works by altering what is known as belief importance. Belief importance is the delegation of different considerations suggested by a frame.¹³⁶ With regard to Cape Wind, the Alliance to Protect Nantucket Sound framed the issue by highlighting the importance of perceived danger to birds flying into the turbines and the impact to the marine ecosystem with the installation of the transmission cable, and

¹³⁴ Williams and Whitcomb, 85.

¹³⁵ Benjamin Storrow, "How Offshore Wind Won Over (Most Of) the Hamptons," *E&E ClimateWire*, December 12, 2022, <https://www.eenews.net/articles/how-offshore-wind-won-over-most-of-the-hamptons/>.

¹³⁶ James N. Druckman, "On the Limits of Framing: Who Can Frame?" *The Journal of Politics*, vol. 63, no. 4 (2001), 1041-1066, <http://www.jstor.org/stable/2691806?origin=JSTOR-pdf>.

downplaying the benefits associated with a clean energy source.¹³⁷ By focusing more on perceived possible negative outcomes as opposed to the positive impact of having a clean energy source that would reduce pollution and dependence on fossil fuels, they were able to frame Cape Wind in a negative light at the outset of debate about the project. From this frame, the elites were able to shift something that was originally well-received by the residents of Cape Cod into something that they were willing to coalesce into a group to fight against.

There are many elites who are generationally wealthy, meaning that they were born into their wealth and their name carries weight regarding public opinion. For example, Robert F. Kennedy Jr., who was an active oppositionist to Cape Wind, is the nephew of JFK, who was one of the most popular Presidents in recent history. As a result, the Kennedy name can be equated to royalty in Massachusetts.¹³⁸ There are numerous studies that have shown that a source having some sense of perceived credibility is important in determining the success of one's ability to frame.¹³⁹ Because many of the founding members of the Alliance to Protect Nantucket Sound had similar backgrounds to RFK Jr., it is not surprising that the Alliance was able to establish credibility within the Cape Cod community very quickly. Since they had this established credibility, it was then possible for them to participate in another aspect of framing, specifically known as contesting knowledge. Contesting knowledge is a process where elites fund experts to "disqualify" knowledge that poses a threat to their power base, as well as attack those who produce and uphold potentially "damaging knowledge."¹⁴⁰ The Alliance to Protect Nantucket Sound was successful in this for the first few years of their creation, seeing as one of the main members of the Alliance was the editor of

¹³⁷ Williams and Whitcomb, 77.

¹³⁸ Adrienne Donica, "Robert F. Kennedy Jr." Biography.com, April 6th, 2023, <https://www.biography.com/history-culture/robert-f-kennedy-jr>.

¹³⁹ Druckman, 1045.

¹⁴⁰ Eric Bonds, "The Knowledge-Shaping Process: Elite Mobilization and Environmental Policy," *Critical Sociology* vol. 37, no. 4, (2010), <https://journals.sagepub.com/doi/abs/10.1177/0896920510379440?journalCode=crsb>.

the *Cape Cod Times*, which was the most well-respected local newspaper. By having the editor on the side of the Alliance, they were able to run messages that were not necessarily true, such as claiming that the turbines would kill so many birds they would be the “Cuisinart’s of the air.”¹⁴¹ Additionally, through their funding, the Alliance was able to circulate a report that stated there would be significant economic losses should Cape Wind be constructed, even though outside of the Massachusetts area the report was slammed in the press for not being credible.¹⁴² These tactics helped the Alliance maintain their support for those first few years.

Another important aspect of framing is communication. Without clear, consistent communication, framing cannot be done effectively. In order to effectively frame an issue, the framer needs to know their audience and use language that is appropriate for said audience. Similarly, it is important to use slogans and avoid technical jargon and data without first placing it in context and surrounding it with personal stories and general narratives that incorporate the points they are attempting to make. Without this communication, regardless of their elite status, the framing would not be effective, and they would not gain any additional support.¹⁴³ Within the first few years, the Alliance to Protect Nantucket Sound was able to effectively communicate to the masses. One of the ways they accomplished this was through their slogan, “Save Our Sound.”¹⁴⁴ With these three words they were able to convey the message that the ecosystem of Nantucket Sound was in danger because of a developer coming in to endanger the fish and wildlife. This was particularly effective because of the development that has been plaguing the Cape, specifically by the shore, for decades. Cape Cod was described as “a highly commercial, Disneyesque version of

¹⁴¹ Williams and Whitcomb, 76.

¹⁴² Williams and Whitcomb, 91.

¹⁴³ George Lakoff, “Why it Matters How We Frame the Environment”, *Environmental Communication* (2010), Vol 4:1, 70-81, DOI: 10.1080/17524030903529749.

¹⁴⁴Gemmel, 20:00.

what was once a very lovely seaside area.”¹⁴⁵ Knowing that the issue of commercialization is something that is important to the residents of the Cape, the Alliance was effective in using that as part of their framing of the issue as well. Similarly, they consistently provided visual aids to supplement what they were saying in order to create the context that is essential for their effective framing. In a meeting for the creation of the Alliance to Protect Nantucket Sound, Douglas Yearly gave a presentation and stated, “We aren’t calling it a wind park. We’re calling it an industrial complex.”¹⁴⁶ This is just one example of using language to assist in advancing their narrative regarding commercialization of the Cape.

The Alliance’s Dissolving Public Support

After the first Environmental Impact Statement was released and the public could hear from established scientists about the studies they had done on how Cape Wind will specifically impact Nantucket Sound, support from the general public for the Alliance diminished and there was a dramatic shift towards acceptance of the Cape Wind proposal, as discussed in the previous chapter. It was after hearing directly from these scientists themselves and being able to ask the questions they had at the first public meeting, that the large majority of the public changed their attitude and were able to question the validity of the Alliance’s claims about the problems with the Cape Wind project. From this point forward, the Alliance received more public criticism. In anonymous interviews conducted in 2006, there were two particularly interesting statements that effectively showcased how the public had begun to question the Alliance's claims and could therefore adopt new attitudes toward the project. For example, one individual stated,

“The obvious problem is that there are a lot of very wealthy people who are going to do everything in their power not to have these little half- inch toothpicks sticking up on their horizon. That’s the only problem—to be honest I am hoping that this succeeds, because it is . . . very symbolic of the struggle between the rich and the

¹⁴⁵ Williams and Whitcomb, xv.

¹⁴⁶ Williams and Whitcomb, 86.

public, the people. And the way that the rich are pulling the strings to prohibit something that really does make sense. (CT2)”¹⁴⁷

Likewise, another person remarked,

“The Alliance will come out with blanket statements saying that most people don’t support it, and there is no evidence to support that view. The main reason that people don’t support it is because they don’t have the right information, they are being fed misinformation by well-funded organizations who can afford to send that information out. (CT3)”¹⁴⁸

Additionally, in a public interview and debate on Fox News, Jim Gordon, and Ernie Corrigan, who was a representative for the Alliance to Protect Nantucket Sound, were discussing the Cape Wind project. The moderator of the debate, John Gibson, posed the question of “would I be wrong to suspect that the rich people on Martha's Vineyard and Nantucket -- now Nantucket where the billionaires are pushing the millionaires off -- just do not want to look out there and see these things no matter what the benefit is?”¹⁴⁹ Later on in the interview he reiterates this point and asks, “If it were just the fishermen, would we be having this discussion? Or is the fact that Senator Edward Kennedy is opposed; the rock stars at Martha's Vineyard are opposed; rich people who generally get their way are opposed?”¹⁵⁰ With such a quick fall of support, the Alliance quickly realized that they needed to rely solely on their monetary assets once they no longer had public opinion on their side.

Using Their Money and Prestige to Their Advantage

The Alliance to Protect Nantucket Sound included a variety of famous politicians who were not in support of Cape Wind. One tactic that they were able to utilize was to “hijack” the public meetings that were set up by the Army Corps of Engineers and later the Minerals Management Service by having their public figures come to these meetings and monopolize time that was reserved for the public to raise comments and concerns. At one particular meeting, the room was so

¹⁴⁷ Kempton et al., 141.

¹⁴⁸ Kempton et al., 142.

¹⁴⁹ Gibson, “Interview with John Gordan and Ernie Corrigan”.

¹⁵⁰ Gibson.

crowded that despite people only getting a microphone for two minutes to speak their piece, there were still going to be many in the crowd who were unable to speak. The Alliance used their political connections to have large numbers of families of politicians come and fill up the time slots allotted for speeches so those who were supporting Cape Wind got little, if any, time to speak. At one particular meeting Mitt Romney, who was the Governor of Massachusetts at the time, gave little warning before going up to the stage where the debate was occurring and monopolizing more than his fair share of time, since it was impossible to limit the governor of the state to a two-minute speech.¹⁵¹ After he spoke, the Army Corps was again given little warning as to who would be speaking next. They had the Attorney General Tom Reilly speak next. He was supposed to be limited to the two minutes that the rest of the general public was getting, but he went past his time, which frustrated the public and led to catcalls during the rest of his speech.¹⁵² By monopolizing time for the general public to speak about reasons they supported or other concerns they may have had, the Alliance was able to mute supporters as the project began to drag on.

With the number of political figures and rich elites, it is no secret that the Alliance was well-funded. As mentioned in previous chapters, they had millions of dollars in donations at their disposal.¹⁵³ With the sole focus of the Alliance to Protect Nantucket Sound being to ensure that Cape Wind be canceled, it was in their interests to continually delay the project. In a 2013 interview with *CommonWealth*, William Koch, who was a significant donor to the Alliance, was asked how he, as an opponent, would aim to block Cape Wind. In his response he stated that one of the strategies was “delay, delay, delay” and that “hopefully we can win some of the bureaucrats over.”¹⁵⁴ This is exactly what they did. Over the 16-year lifespan of Cape Wind, the Alliance to

¹⁵¹ Williams and Whitcomb, 225.

¹⁵² Williams and Whitcomb, 229.

¹⁵³ Williams and Whitcomb, 91.

¹⁵⁴ Bruce Mohl, “William Koch: Delay, Delay, Delay,” *CommonWealth*, April 9, 2013, <https://commonwealthmagazine.org/environment/005-interview-with-bill-koch/>.

Protect Nantucket Sound and other interested parties that they partnered with, such as the Wampanoag Tribe, brought 4 major suits against Cape Wind and the State and Federal Government along with countless smaller suits that were either dismissed outright or coalesced into other larger suits.¹⁵⁵

From the beginning of 2005 to 2017, the furthest that Cape Wind got to any construction of a turbine was a data tower to analyze the conditions out in Nantucket Sound and their power contracts with NStar and the National Grid, both of which were destroyed by 2017. Jim Gordon himself stated that at the end of 2017 when the project was officially terminated, he had spent over \$100 million of his own investments. He noted, “In my wildest imagination, I never envisioned just how exhaustive, how time consuming and how expensive this process would be.”¹⁵⁶ During the same interview, a former state Secretary of Energy and Environmental Affairs Ian Bowles said, “The project unfortunately demonstrated that well-funded opposition groups can effectively use the American court system to stop even a project with no material adverse environmental impacts.”¹⁵⁷ While Cape Wind may have been the first wind farm blocked from completion in the United States, it was neither the first environmental project nor policy that has been destroyed due to the interference of elites and politicians. In many instances, Americans want renewable energy in their neighborhoods and powering their homes. But they are often left with coal, oil, or natural gas.

The Role of Big Oil

Many of the large donors from the Alliance to Protect Nantucket Sound came from families with backgrounds in the fossil fuel industry. Douglas Yearly, as previously mentioned, once sat on the board of directors at Marathon Oil Corporation and was named “Copper Man of the Year” for

¹⁵⁵ Katharine Q. Seelye, “After 16 Years, Hopes for Cape Wind Farm Float Away”.

¹⁵⁶ Katharine Q. Seelye.

¹⁵⁷ Katharine Q. Seelye.

his work in mining.¹⁵⁸ In addition, William Koch and his donations to the Alliance come from his Koch Industries money. Koch Industries is an oil refinery company.¹⁵⁹ Other Alliance donors included Nancy L. Garraghan, who was the head of Heritagenergy, which was a New-York based fuel-oil business, as well as the Albert J. and Diane E. Kaneb family fund. Albert Kaneb was at one point the president and co-owner of Northeast Petroleum Industries.¹⁶⁰ While these are only the names that are available publicly that can be connected to the fossil fuel industry, it is possible that there are other donors who remained private yet still have connections. When the Alliance says that they support wind power, just not on the Cape, they are not revealing that a large portion of their funds come from donors who benefit from the continued burning of fossil fuels.

The fossil fuel industry is one of the most prosperous in the nation. Understandably, they have influence that reaches into every sector of the United States government, and as a result can influence a variety of environmental policies. One of the most accessible ways for big oil to influence politicians and in turn the environmental legislative agenda, is through the American Legislative Exchange Council, also known as ALEC. ALEC defines itself as “a forum for state legislatures and stakeholders to exchange ideas and develop real, state-based solutions to encourage growth, preserve economic security and protect hardworking taxpayers.”¹⁶¹ However, others describe ALEC as an organization that can, “reap huge rewards for companies, because ALEC operates in all 50 states, and helps pass legislation to lower taxes, weaken labor unions, and push back against environmental regulations wherever it can.”¹⁶² Many politically conservative elites either have companies that are members of ALEC or have contributed to ALEC themselves.

¹⁵⁸ Williams and Whitcomb, 84.

¹⁵⁹ Williams and Whitcomb, 91.

¹⁶⁰ Williams and Whitcomb, 93.

¹⁶¹“About ALEC,” American Legislative Exchange Council, Accessed April 20, 2023, <https://alec.org/about/>.

¹⁶² “How ALEC Helped Enron,” FutureHindsight, Accessed April 20, 2023, <https://www.futurehindsight.com/blog/how-alec-helped-enron>.

Currently, the largest donating funder of ALEC is Koch Industries. Due to a whistleblower campaign, ALEC is no longer as prominent as it was during the early 2000s, but they are still responsible for drafting some of the most environmentally damaging bills.¹⁶³ While it is true that not all of these bills are able to pass and become laws, it remains that ALEC and the oil companies and their CEOs that support it are responsible for a considerable amount of environmental degradation in the United States.

One of their most damaging pieces of legislation proposed by ALEC is designed to deregulate states' renewable portfolio standards (RPS). An RPS is a state regulation that requires a state to increase the percentage of their energy that is coming from renewable resources, such as wind or solar. For example, a state may pass an RPS that requires 40% of total energy to come from renewable resources by the year 2040. The goal of an RPS is to ease states into a carbon-neutral future, meaning there is no net release of carbon dioxide into the atmosphere.¹⁶⁴ Lobbying organizations like ALEC and big oil companies like Exxon and Peabody Energy have drafted model bills for state legislatures to enact that effectively repeal an RPS by allowing some non-renewable sources of energy.¹⁶⁵ With oil executives still having significant power over state legislators, it will be difficult to implement renewable energy sources and work towards a carbon-neutral future, which is the goal of the Biden Administration.

Offshore Wind Since 2017

Despite the fact that Cape Wind was the first offshore wind farm proposed and never built, it was not a total failure. Cape Wind paved the way for other offshore wind projects to take hold in the

¹⁶³ Lisa Graves, "ALEC, 'Model Legislation', and Preemption," Local Solutions Support Center, March 15, 2023, <https://www.supportdemocracy.org/the-latest/alec-model-legislation-and-preemption>.

¹⁶⁴ "Renewable Portfolio Standards," National Renewable Energy Laboratory, Accessed April 20 2023, <https://www.nrel.gov/state-local-tribal/basics-portfolio-standards.html>.

¹⁶⁵ "American Legislative Exchange Council," Energy and Policy Institute, Accessed April 20, 2023, <https://www.energyandpolicy.org/american-legislative-exchange-council/>.

United States. The Biden Administration has set a goal of having 30 GW of offshore wind power by 2030. The coast of the United States has the potential for more than 2,000 GW of energy, which is two times the present generation of the U.S. electric grid.¹⁶⁶ As stated before, there are only two fully operational offshore wind farms in the U.S. However, there are 20 currently proposed wind farms, most of them along the east coast.¹⁶⁷ There are two prime examples that are reminiscent of Cape Wind.

The first of these shows how having the cooperation of elites allows for the process of offshore wind development to move smoothly. Off the coast of the Hamptons developers are currently laying transmission cables under the road, causing construction sites throughout the usually pristine Hamptons. The Hamptons are home to wealthy year-round residents as well as well as celebrities during the summer. Compared with Cape Wind, there is already more progress made in 1 year compared with the 16 years for Cape Wind. The town board for East Hampton approved the laying of the transmission line in an easy 4-1 vote.¹⁶⁸ When discussing getting the town residents on board, year-round resident Peter Van Scoyoc stated, “I think it was a matter of just socializing the idea and, you know, weighing benefits versus detriments.”¹⁶⁹ For people who had an idea of the debacle that had occurred with Cape Wind, the success here is breath of fresh air.

Conversely, there is an offshore wind proposal off the coast of Martha’s Vineyard in Massachusetts that is facing opposition in the form of 4 separate lawsuits. Despite not being located in the Nantucket Sound and instead being further out in the Atlantic Ocean, there are still a litany of

¹⁶⁶ Miriam Goldstein, Mike Williams, & Alexandra Carter, “The Road to 30 Gigawatts: Key Actions to Scale an Offshore Wind Industry in the United States,” *Center for American Progress*, March 14, 2022, <https://www.americanprogress.org/article/the-road-to-30-gigawatts-key-actions-to-scale-an-offshore-wind-industry-in-the-united-states/>.

¹⁶⁷ Miriam Goldstein, Mike Williams, & Alexandra Carter, “The Road to 30 Gigawatts: Key Actions to Scale an Offshore Wind Industry in the United States,”.

¹⁶⁸ Storrow, “How Offshore Wind Won Over (Most of) the Hamptons.”

¹⁶⁹ Storrow.

lawsuits coming their way. Two of these cases are from landowners on Martha's Vineyard, and the other two are from fishermen. Similarly to the Alliance to Protect Nantucket Sound, there is a new opposition group called Nantucket Residents Against Wind Turbines that is incredibly similar in the make-up of its members and their concerns about wind farms impacting their views.¹⁷⁰ This is unsurprising considering the success that the Alliance to Protect Nantucket Sound had against Cape Wind.¹⁷¹

Overall, Cape Wind was an example of what occurs when elites mobilize against an environmental project because it will inconvenience them in some way, regardless of the overall benefits it would provide for the rest of the citizens and overall public support. Offshore wind is an evolving energy source that will undoubtedly become more and more common in the coming decades as the United States continues to fight off climate change.

¹⁷⁰ Storrow, Benjamin. "4 Lawsuits Threaten Vineyard Wind." *ClimateWire*. March 29, 2023. <https://www.eenews.net/articles/4-lawsuits-threaten-vineyard-wind/>.

¹⁷¹ "Stakeholders." Alliance to Protect Nantucket Sound. Accessed April 20, 2023. <http://saveoursound.org/stakeholders/>.

Conclusion

The failure of Cape Wind to construct any turbines on Nantucket Sound shows the ability of elite members of society and politicians to manipulate public policy so that it benefits them, regardless of public opinion. This hijacking of the policy process by those with the money to do so is not a new phenomenon. However, this is something that is particularly prevalent in the environmental public policy arena. This is extremely troubling, considering the warnings that scientists have given regarding climate change. Without action taken to limit global warming to 1.5 degrees Celsius by 2040, there will be irreversible damage to the planet, which will cost billions of dollars.¹⁷² Cape Wind was set to be the first offshore wind farm in the United States, and it was over a decade from the proposal of Cape Wind until a second wind farm off the coast of the United States was even considered. The significant backlash to Cape Wind as well as the amount of money it cost the developers made others wary of proposing other offshore wind farms. It is highly likely that had Cape Wind followed a normal timeline for the construction of a wind farm, the United States would have more than 2 fully operational wind farms currently.

As the first proposed offshore wind farm in the United States, Cape Wind laid the groundwork for the regulatory process for an offshore wind farm. After the Energy Policy Act of 2005, the Department of the Interior, specifically the Mineral Management Service, oversees approving a permit for these wind farms, conducting the environmental studies, preparing the Draft Environmental Impact Statement, holding the public hearings, releasing the Final Environmental Impact Statement, and giving the final permit for construction.

President Biden recently approved a controversial drilling project in Alaska that has been called a “carbon bomb” that would release a projected 280 million metric tons of CO₂ into the

¹⁷² Jeff Turrentine, “Global Warming 101.”

atmosphere.¹⁷³ The main reason that Biden approved the project was the power and money that the oil company, ConocoPhillips, has. It was projected that were Biden to block the Willow Project and ConocoPhillips filed suit against them, it would cost the government an estimated \$5 billion in legal fees.¹⁷⁴ Despite the fact that President Biden stated in his Presidential bid that there would be “No more drilling on federal lands, period. Period, period, period,” the intimidation of money caused him to backtrack on this promise and allow drilling that will cause excessive emissions into the atmosphere, but in a landscape that is in danger due to melting ice caps from global warming.¹⁷⁵ However, when there is not any elitist opposition to projects or threats from large corporations, environmental projects have been successfully completed and have been creating renewable energies for the United States and working on reducing greenhouse gasses. For example, in the United States there are two currently operating offshore wind farms, and over 20 that are in varying stages of the approval/construction process.¹⁷⁶

The 20 proposed offshore wind farms are currently at differing phases of the process, but it is unlikely that any of them will have the numerous court battles at every step of this process that faced Cape Wind. In the past few years, there has been a considerable increase in polling numbers regarding pursuing offshore wind and other forms of renewable energy. Across all demographics there is broad support (66%) for the government to incentivize the production of wind and solar energy as a way for the United States to be carbon neutral by 2050.¹⁷⁷ Cape Wind did not have this

¹⁷³ Lisa Friedman, “How Biden got from ‘No More Drilling’ to Backing a Huge Project in Alaska,” *New York Times*, March 13, 2023, <https://www.nytimes.com/2023/03/13/climate/willow-biden-oil-climate.html>.

¹⁷⁴ Friedman.

¹⁷⁵ Friedman.

¹⁷⁶ Miriam Goldstein, Mike Williams, & Alexandra Carter, “The Road to 30 Gigawatts: Key Actions to Scale an Offshore Wind Industry in the United States,” *Center for American Progress*, March 14, 2022, <https://www.americanprogress.org/article/the-road-to-30-gigawatts-key-actions-to-scale-an-offshore-wind-industry-in-the-united-states/>.

¹⁷⁷ Alec Tyson, Cary Funk, and Brian Kennedy, “What the Data Says About Americans’ Views of Climate Change,”

level of support when it was first proposed. Had Cape Wind followed a normal timeline, it is likely that it would have been effectively producing carbon-free energy for 75% of Cape households, and maybe even more if the turbines were continuously updated with new technology.¹⁷⁸

The failure of Cape Wind is in part due to excessive legal costs that resulted in bankruptcy. These costs accumulated from the continuous obstacles that prevented the construction of the turbines from the Alliance to Protect Nantucket Sound. The Alliance had various donors and supporters, from former Massachusetts Governor Mitt Romney, to then Senator Ted Kennedy, as well as Robert F. Kennedy Jr., and Congressman William Delahunt to name the most well-known supporters. They also had the support of socialites who owned property on the Cape and were looking to maintain their pristine view. Their arguments were not supported by the general public, and support soon turned away from them and towards Cape Wind. The average residents of the Cape were ready for offshore wind energy as an alternative to the power plant located near them. The Cape had the worst air quality in the state of Massachusetts, and it was continuing to deteriorate as the power plant continued to pump greenhouse gases and other pollutants into the air.¹⁷⁹ Despite these facts, Cape Wind was defeated because of the ability of the opposition to fund continuous legal battles.

Overall, Cape Wind serves as a lesson as well as a warning for what can occur when elite members of society are successful in manipulating environmental policy to suit their needs, regardless of what it means for the greater good. Despite the rocky start for offshore wind in the United States, it is now headed in a better direction, especially with the current plan that President Biden has in place, aiming for 30 GW of offshore wind energy by the year 2030.¹⁸⁰ With the

¹⁷⁸ Spinelli, 745.

¹⁷⁹ Williams and Whitcomb, 8.

¹⁸⁰ Miriam Goldstein, Mike Williams, & Alexandra Carter, "The Road to 30 Gigawatts: Key Actions to Scale an Offshore Wind Industry in the United States,".

support of the federal government, especially with government incentives, it is possible the offshore wind will soon become a dominant form of clean energy for the United States and become an instrumental partner in decreasing our carbon footprint as a country.

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The political ecology of gear bans in two fisheries: Florida's net ban and Alaska's Salmon wars

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Abstract

Parametric management in fisheries, which describes the management of how, where and when fishing occurs, is often essential for achieving sustainability. Changes to these parameters likely have impacts on stakeholders, however, for example through the costs and allocative consequences of spatial restrictions or gear changes. Here, I discuss two cases where gear bans have been implemented or proposed in response to conservation concerns: the commercial net ban enacted in Florida in 1995 and the failed ban on set gill-nets in parts of Alaska. The two cases are remarkably similar, although the outcomes were quite different because of the social context of each fishery. Lessons from the Florida ban, which resulted in numerous negative social and ecological impacts, are informative regarding the impacts that likely would have accompanied the Alaska ban, had it proceeded. In both cases, the gear bans have had or were poised to have notable impacts on allocation, but scientific evidence for their necessity was limited. These cases show how ethical considerations can be inseparable from the ecological aspects of managing fisheries, and that when communities grapple with the sustainability of fisheries, they are simultaneously seeking to define the socially acceptable uses of those resources. I suggest a set of questions that can be asked when proposing parametric changes to fisheries, including how those changes will impact social well-being and community resilience. These are questions that I argue must be addressed if both ethical and sustainable fisheries are the goal.

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Introduction

Contemporary fisheries management is built on a substantial foundation of scientific concepts and tools; biomass, escapement, quotas and maximum sustainable yield (MSY) are among the most widely known examples. Yet, these largely quantitative concepts are only one-half of the managers' toolkit, and while they are well suited to the act of governing in that they make fisheries more 'legible' (Scott 1998), they can oversimplify the complexity that is inherent to marine ecosystems and maritime social-ecological systems (Larkin 1977; Wilson *et al.* 1994; Acheson and Wilson 1996; Bavington 2010; Finley 2011). As such, attention to the parametric dimensions of a fishery, such as who fishes and where, when, and with what gear fish are caught, is also essential for the sustainable management of fisheries (Wilson *et al.* 1994; Acheson and Wilson 1996). Sometimes referred to as logistic decisions (Pinkerton 2011), parametric decisions are essential for a number of reasons: gear can be destructive to habitat, and gear selectivity can have consequences for a stock's genetic diversity (Law 2000), to name but two. Likewise, there may be certain geographic places or stages in a fish's life cycle where stocks or substocks are particularly vulnerable to fishing pressure (Frank and Brickman 2000; Hilborn *et al.* 2003). Strategic spatial closures may also be an effective way to enhance fished populations (Halpern *et al.* 2009; Lester *et al.* 2009). Finally, parametric management measures are important in many traditional fishing systems, embedded within social institutions for territoriality, sharing and ethics, and as such are important to both community resilience and ecosystem sustainability (Acheson 1975; Acheson and Wilson 1996; Cinner 2007).

A challenge to implementing changes to the parameters of a fishery is that these changes are simultaneously ecological and political in nature. Changes in gear type, for example, or of the timing of open fishing seasons, can have allocative implications in addition to the desired ecological effects. Thus, when parametric changes are proposed and implemented, decision makers must also account for issues such as people's needs, equity and power: issues that defy quantification and are not normally within the purview of managers, but are nonetheless important to the health and sustainability of fisheries (Clay and McGoodwin 1995; Lam and Pitcher 2012). In some places, fisheries

governance has been structured to explicitly separate these political and scientific dimensions of management (Loring 2013). Yet, as much of the body of political ecology literature attests, it is rare that decisions regarding ecological concerns do not have differential political consequences, and vice versa (Tsing 2002; Robbins 2012).

Below, I use the frame of political ecology to explore the challenges of parametric management in fisheries, including this question of whether it is desirable or even possible to address so-called 'scientific' and 'political' decisions separately. I discuss two cases where parametric changes – specifically, gear bans – were implemented or proposed in response to conservation concerns: a commercial net ban enacted in Florida in 1995 and a failed ban on set-net fishing in Alaska's Cook Inlet. The comparison illustrates the interplay of ecological and political goals and motivations of stakeholders involved in such decisions. Lessons from both cases, which include the social and ecological impacts that have resulted since the Florida ban, and the larger societal discourses that surround both, can inform thinking about how parametric changes are made in any fishery. Specifically, I suggest a set of questions that can be asked when proposing and implementing parametric changes, including how those changes may impact social well-being and community resilience, and whether direct or indirect unintended ecological consequences may emerge as a result. In some cases, the answers to these questions are influenced by societal institutions that most would consider to be well outside the scope of fisheries management, such as whether basic human rights are protected. Nonetheless, these two cases reinforce an axiom in political ecology that the ecological aspects of managing natural resources are generally inseparable from ethical considerations. With this in mind, I conclude with some comments how more ethical and sustainable fisheries management can be achieved.

Background

James Scott (1998) argues that the state generally governs through standardization – implementing concepts in policy and regulation that render complex societal and environmental systems *legible*. Weights and measures, environmental quality standards and age-based definitions of adulthood are all examples of ways the government makes society more legible to implement laws that are

enforceable and just. However, Scott also argues that this legibility comes with a cost of masking complexity; in the case of adulthood, for example, a reference age of 18 or 21 can be useful for enforcing laws regarding alcohol consumption, smoking and voting rights, but when faced with whether a young person should be held accountable for criminal acts, the question of adulthood is less straightforward, leaving courts to deliberate on a case-by-case basis whether to try young people as adults.

In natural resource management, several concepts are used by the state to make natural systems and human–environment interactions more legible. Many of these are drawn from science: concepts such as the ecosystem, population and meta-population, and maximum sustainable yield (MSY). In fisheries, MSY is one of the most widely used, but in keeping with Scott's argument, MSY and the other quantitative concepts that accompany it can conceal the significant complexity that is inherent to marine ecosystems (Larkin 1977; Bavington 2010; Finley 2011). As such, if management regimes focus too narrowly on MSY or some similar benchmark, other fishing-related impacts that might threaten the future of a fish population and fishing community can be overlooked (Larkin 1977; Wilson *et al.* 1994; Law 2000; Schindler *et al.* 2010; Loring 2013). Similarly, categories such as sport, subsistence, artisanal, and commercial provide managers with a framework for differentiating and addressing different scales and technologies of fishing, but these categories can also be oversimplifications that create challenges for the people being governed. An example is fishing among Alaska Natives, for whom the line between for-subsistence and for-profit activities is blurry at best (Carothers 2008; Jenkins 2015). Finally, fishing licences and quotas provide managers with control over who has access to a fishery, but they also have the potential of dispossessing people of their rights and limiting sociocultural flexibility and adaptability for fishermen coping with environmental variability and change (McCay 1995; Carothers 2010; Brewer 2011; Carothers and Chambers 2012).

One additional legibility challenge for the state when governing fisheries is that fisheries are embedded within complex social–ecological systems, which invariably involve multiple groups of stakeholders with differing sets of goals and values (Clay and McGoodwin 1995; Jentoft and Chuenpagdee 2009; Loring 2016). Some fisheries

governance systems attempt to navigate this complexity through a conceptual separation of purportedly scientific decisions (e.g. MSY) from those that are political in nature (e.g. allocation of catches among groups), a way of thinking that continues long-standing narratives of separation among people and nature (Robertson *et al.* 1996). The rationale is that by keeping scientific and political domains separate, special interests are less able to interfere with the accurate assessment and management of fishery's biological status. In Alaska's state-managed fisheries, for example, science issues are generally the domain of the Alaska Department of Fish and Game (ADF&G), while allocation and the overall management plan are the purview of the state Board of Fisheries, a board of political appointees (ADF&G 2009). However, as is evident in the examples of gear changes below, this conceptualization of fisheries as having distinct ecological and political spheres is also an oversimplification. As such, governance systems that do not recognize or address the natural interplay of ecological and social dimensions of fisheries, or that do not foster a deliberative and interactive space for these dimensions to be addressed together (Kooiman *et al.* 2008), can have negative consequences for both the people and the ecosystems involved.

Case studies

The Florida Gill-net Ban

In 1994, the people of Florida passed a constitutional amendment banning the use of commercial entanglement nets (e.g. gill-nets) and other non-entangling nets larger than 500 square feet (e.g. seines) within state waters. Both commercial and sport fisheries are active in these waters, involving finfish species such as mullet (*Mugil cephalus*, Mugilidae), sea trout (*Cynoscion nebulosus*, Salmonidae), pompano (*Trachinotus carolinus*, Carangidae), and Spanish mackerel (*Scomberomorus maculatus*, Scombridae), and shellfish such as Florida lobster (*Panulirus argus*, Palinuridae) and stone crab (*Menippe mercenaria*, Menippidae). Recreational fishing groups and conservation groups lobbied extensively for the net ban, long dissatisfied with the state's management of commercial fisheries (Smith *et al.* 2003). Millions of dollars were spent by boosters of the ban producing misleading propaganda that portrayed commercial fishers as

ecological villains guilty of depleting fish populations and destroying the marine environment, despite the fact that there was and is little scientific evidence available to support these claims (Duff and Harrison 1997; Smith *et al.* 2003). The ban passed with 72 per cent of the popular vote, failing only in the counties of Florida's panhandle where commercial fishing was a major component of local economies (Stern 1999). The ban continues to be in effect, although commercial fishers regularly test and contest the law's scope and interpretations in court (Stern 1999; Walters 2015).

The net ban resulted in multiple ecological and social consequences, although whether these are 'good' or 'bad' is to some extent a matter of perspective. Improvements in several fish stocks have been observed since the ban, such as mullet and Spanish mackerel, although both of these were already improving prior (Adams *et al.* 2000). Other stocks have increased as well, which is not surprising given the significant reduction of fishing mortality: commercial landings dropped from 52 million pounds during 1992-94 to 18 million pounds from 1996 to 1998 (Adams *et al.* 2000). However, many commercial fishers switched to other fisheries following the ban and in particular from finfish to shellfish. For example, as of 2000 the number of active fishers targeting stone crab in Florida had increased from 9 to 36 per cent (Adams *et al.* 2000); as of 2011, the stone crab fishery was considered overfished, indicated by the fact that the number of active traps has doubled in the last two decades but without notable corresponding increase in overall catch (Florida Fish and Wildlife Conservation Commission 2011).

The Florida net ban also had multiple direct and indirect negative impacts on fishing families and communities. Impacts of the drop in commercial landings cascaded across Florida businesses, affecting companies that provided support services such as docking, net mending, and seafood processing and distribution (Shivlani *et al.* 1998). Statewide food security was also impacted by the ban, as many fish houses had to import fish from outside of the state to meet local demand (Shivlani *et al.* 1998). About a quarter of commercial fishing families in Florida dropped out of fishing altogether, and for those who remained, the contribution of fishing to their household income dropped from 80 to 55 per cent (Adams *et al.* 2000). A net buy-back programme was implemented when the ban went into effect, in which 82 per cent of families

participated; nevertheless, these and other state-based support programmes devised to support impacted fishers proved inadequate to addressing the ban's social and economic impacts (Duff and Harrison 1997): 26 per cent of fishing families still needed to collect unemployment as a result of the ban, and 16 per cent also turned to food stamps (Adams *et al.* 2000).

Additional social and psychological impacts of the ban are also evident. Both men and women in fishing families experienced widespread increases in anxiety and depression and decreases in self-esteem as a result of the controversy and disruption to their lives and livelihoods (Adams *et al.* 2000; Smith *et al.* 2003). The psychological well-being of women in fishing households was especially impacted (Smith *et al.* 2003). These outcomes echo research on the psychological and gendered dimensions of change and conflict in other fisheries (Neis and Williams 1997; King 2006; Britton and Coulthard 2013; Neis *et al.* 2013; Harrison and Loring 2014), and further underscore the close personal and cultural ties that fishers in general have to their way of life.

There is also evidence of persistent collective trauma among commercial fishing communities in Florida as a result of losing their livelihoods and being villainized by their neighbours; a memorial plaque titled 'The Last Sunset' stands in front of the City Hall in Cedar Key, Florida, dedicated to the many people who lost jobs as a result of the ban. The ban's impact on local communities even made its way into the fiction of best-selling Florida novelist Randy Wayne White (1997).

Because of the lack of data, it is not possible to evaluate whether the ban was necessary for the conservation of the various fish stocks in Florida's nearshore waters; Smith and colleagues (2003) argue that the ban may have actually allowed problematic sport fishing practices to continue. What is clear, is that the ban dramatically re-allocated marine resources from commercial to sport sectors, and in a way that circumvented existing natural resource policy, management agencies, and the best available science (Adams *et al.* 2000; Smith *et al.* 2003). Despite being enacted through the popular vote, Salz (1998) argues further that the ban represents a failure of deliberative democracy, in that one special interest group succeeded in remaking fisheries in Florida at the expense of both procedural and distributive justice. What's more, the negative rhetoric regarding commercial

fishers in Florida continues; in early 2015, the ban was unsuccessfully challenged in court by commercial fishers. Commenting on the courts' decision, a representative of the Coastal Conservation Association Florida (CCAF) cautioned against 'turning' the clock back to the *dark days* of gill-netting' (Lund 2015; emphasis mine). Comments from a second representative of CCAF also make clear the group's allocative rather than conservation-minded motivations: '[the state and its lawyers] did a fantastic job to ensure that our state remains the *Sportfishing Capital of the World* [*sic*]' (Lund 2015, emphasis mine).

Conflict over Salmon in Cook Inlet, Alaska

Alaska's commercial fisheries maintain a widespread reputation for sustainability, although some concerns have been raised regarding whether current practices are in fact ecologically and socially sustainable (Loring 2013; Richmond 2013; Jenkins 2015). Salmon fisheries in particular are experiencing numerous challenges (Loring and Gerlach 2010; Loring *et al.* 2014; Jenkins 2015; Lewis *et al.* 2015), including those in the Cook Inlet region of Alaska. This region, which is home to all five species of Pacific salmon (*Oncorhynchus spp.*, Salmonidae), is notorious among Alaskans for the bitter and long-standing conflict between the commercial and sport tourism sectors (Harrison and Loring 2014). Commercial fisheries in Cook Inlet include a drift fleet, which fishes with gill-nets in the open water, and a set-net fleet, which also fishes with gill-nets, but set to fixed sites along the east and west coast of the Inlet. The commercial fleet targets sockeye salmon (*O. nerka*, Salmonidae), although all five salmon species are taken and are important to the resilience of the fisheries (Loring 2016). The sport sector, which includes local anglers as well as a robust fleet of charter operations, fishes for many species, including king salmon (*O. tshawytscha*, Salmonidae), sockeye salmon, and a handful of other freshwater fishes in the rivers, as well as Pacific Halibut (*Hippoglossus stenolepis*, Pleuronectidae) and a variety of rockfishes on open waters. The sport anglers and charter operators that are most directly engaged in conflict with commercial set-net fishers are those that operate in the region's rivers, the most notable perhaps being the Kenai River, which is widely considered to be a world-class sport fishing destination.

At the crux of the conflict among commercial and sport fishers is a debate over how king salmon should be allocated. Sport fishing boosters argue that in-river angling and tourism makes more money with king salmon than does commercial fishing, and as such, king salmon should be allocated for sport uses while commercial fleets should focus on sockeye (Mayor's Blue Ribbon Sportsmen Committee 2011). Although not the primary fished species by catch for either sector (Loring 2016), king salmon is the iconic and sought after 'trophy' fish. Conflict among the sectors has flared in recent years (Harrison and Loring 2014), and weak king salmon returns have resulted in several closures and limitations on both the set-net fleet and sport anglers to ensure escapement of king salmon to their spawning grounds (Shields and Dupuis 2014). The so-called 'east side set-netters' have borne the greatest impacts of these measures, logging noteworthy losses while the sport fishery on the Kenai river has continued to have above average overall annual catches (Loring 2016).

The cause for the apparent king salmon decline is unknown, although current thinking points to a mix of likely drivers including commercial by-catch by industrial groundfish fisheries, climate change and other oceanographic influences on marine survivorship (ADF&G Chinook Salmon Research Team 2012; Lewis *et al.* 2015). Kenai River king salmon in 2014 and 2015 showed some improvement, but it is too early to know whether the closures enacted in the last few years have had a positive and lasting impact on Kenai River runs because king salmon do not return to spawn until 5-7 years of age. Likewise, little is known about how king salmon behave in the Inlet, although preliminary studies suggest that gear changes in the set-net fishery could improve king salmon passage (Welch *et al.* 2014; but, see Willette *et al.* 2015). However, catch data show that sport anglers in the Kenai River generally harvest more king salmon than east side set-netters, with the ratio of kings caught by set-netters to sport anglers being 0.79 (Shields and Dupuis 2014; as analysed in Loring 2016). As such, there is no apparent *ecological* basis to single out the set-net fishery as the primary king salmon mortality concern.

Despite uncertainty regarding the status of king salmon and the causes of recent declines, the Alaska Fisheries Conservation Alliance (AFCA), a self-described sport fishing booster organization,

pushed a ballot initiative to eliminate the use of set-nets near urban areas of the state (Caldwell 2014). This initiative ultimately failed at the level of the state supreme court (Bolger 2015). Although the proposed ban did not single out specific fisheries, the primary people impacted would have been residents of the Kenai Peninsula, because set-net fishers there are largely locals (Harrison 2013). Similar to the messaging used for the Florida ban, proponents of the Alaska ban argued that set-nets are 'antiquated' (Caldwell 2014); also similar to the Florida ban, set-net fishers had to cope with the social and psychological stresses of being villainized by their neighbours and having the future of their livelihoods threatened (Harrison and Loring 2014; e.g. Hermansen 2014). Set-net fishing, by and large, involves small, family-run operations that have fished in the region for generations, although they are often portrayed as outsiders in the rhetoric of the conflict, in part perhaps because much of their fish is marketed globally (Loring *et al.* 2014).

Lacking scientific evidence that the ban is necessary for conservation reasons, the motivation for the proposed ban is ostensibly a re-allocation of king salmon from set-netters to the sport sector. Interestingly, when the ban was first challenged in state court, Alaska State Superior Court Judge ruled that the ban would not represent a reallocation, arguing that the state is bound only to protect commercial fishing as a single sector. In the Judge's words, 'set netters are not a 'user group' any more so than sport fishers using fly rods are a distinct user group from those using spinning rods' (Easter 2014, ; p. 5). This finding was ultimately overturned by the state's supreme court (putting an end to the proposed ban), in part because it is factually inaccurate (Bolger 2015): most of Alaska's commercial fisheries, including those in Cook Inlet, are managed as limited entry, meaning that set-net fishers displaced by the ban could not simply adapt by adopting new gear and targeting new species – entering the drift fleet for example – except at great financial cost. Barring a change to how fishing rights are governed, the ban would have effectively pushed set-net families out of commercial fishing entirely.

Discussion

Management of the parametric aspects of fisheries, such as allowed gear and spatial and temporal

restrictions, is no doubt essential to achieving sustainability. Nonetheless, parametric changes are often contested by stakeholders because of the social impacts that can accompany them. There are many well-known cases where society has grappled or is grappling with reforms to ecologically harmful but financially lucrative industrial fishing technologies: dolphin by-catch in tuna fisheries, bottom trawling and factory ships, and the fish traps used by salmon canneries in Alaska at the turn of the 20th century are all examples. However, whereas large-scale, transnational actors may be well-positioned to adapt and even capitalize on such changes despite their costs (Österblom *et al.* 2015), the ramifications of parametric management changes for small-scale commercial and artisanal fishers can be livelihood altering.

The two cases reviewed here underscore and enrich this point. First, they illustrate how the allocative consequences of parametric management will vary depending on the broader social context of the fishery, such as the enforced system of fishing rights (see also Davis 2014). In Alaska, many fisheries are enclosed, and as such, set-net fishers would have had limited options for switching gear or switching to a new fishery. In Florida, the impacts of the ban were no doubt severe, but there were some opportunities for fishers to adapt by moving into other fisheries or fishing areas. Second, the two cases illustrate how parametric changes can create new pressure on other resources, including other fisheries and other components of local food systems. The stone crab fishery, for example, is ostensibly overfished in Florida as a result of the ban. Many Alaskans obtain local seafood through barter and trade with commercial fishers, so a set-net ban in Cook Inlet would almost certainly have impacted local food security (Loring *et al.* 2013). How this would have cascaded through the Alaska food system, perhaps creating new pressures on other resources, is unclear, although closures or declines in fisheries have been shown in Alaska and elsewhere to drive people to put additional pressure on terrestrial species of conservation concern (Brashares *et al.* 2004; Loring and Gerlach 2010).

Third, the two cases illustrate how ecological concerns, even spurious ones, can be used as a veil for advancing political and economic agendas that may not be socially just or ecologically justified. There is no apparent basis for conservation

actions in Cook Inlet to single out the set-net fishery, although the additional passage of king salmon into the river system would surely benefit the stocks and would clearly benefit the sport tourism sector. Actors from different fishing sectors rarely have equal resources with which to engage in campaigns to influence public opinion, which means that unless governance is designed to ensure equitable outcomes in these sorts of conflicts, winners and losers will be determined by such factors as class, power and bureaucratic knowledge (Smith and Jepson 1993).

On the surface, it may seem appealing to the state to approach the scientific issues in fisheries separately from social matters, but what these cases collectively illustrate is that social and ecological outcomes for a fishery or any natural resource cannot be pursued piecemeal. The feedbacks and interconnections among the two spheres are too numerous, and while trade-offs surely exist in many scenarios, in general, social justice and ecological sustainability in small-scale fisheries are either mutually constituted or mutually imperilled.

One way to think about this reciprocal relationship among societal and ecological outcomes is the 'marginalization and degradation thesis' (Robbins 2012). This thesis holds that the marginalization of peoples, and in particular, threats and constraints to people's ability to maintain secure livelihoods, drives behaviours that degrade the local environment. A positive feedback loop is involved, whereby the environmental degradation that results from people being marginalized furthers inequity and marginalization, which further escalate environmental degradation. This thesis is different from the tragedy of the commons thesis, which places blame for ecological degradation on human nature. Instead, political ecology and the marginalization–degradation thesis recognize that the incentives for overharvesting are different at different scales, driven by commodification of the environment at the global scale, and by a failure or lack of social institutions that protect basic human rights and ensure just outcomes at the local scale (Robbins 2012; Longo *et al.* 2015). What the marginalization–degradation thesis highlights in the present discussion is a mechanism by which unintended consequences can occur from actions taken to conserve resources; if people are marginalized by changes in fisheries to the point where social justice is compromised and their livelihoods

are threatened, they are more likely to enact behaviours that are unsustainable.

Certainly, social justice considerations were not addressed in the case of the Florida ban. The State of Florida attempted to provide sufficient compensation to disenfranchised fishers, but as discussed above, the financial reparations and job training initiatives fell short because they were implemented from a strictly neoliberal understanding of what values fishers derive from fishing (Smith *et al.* 2003). The numerous psychological and social impacts experienced by fishers in Florida likewise reinforce what social scientists have understood about small-scale fishing families and maritime cultures for some time: that people derive multiple non-economic benefits to their health and well-being from fishing. These considerations can be missed, however, when the focus of governance is on specific 'gear types' or 'sectors', concepts which make the fishery legible, but in so doing, mask differences in scale and the diverse needs and circumstances of the people and families involved. This shortcoming of legibility is notable in the Cook Inlet case, where the limited entry system makes it inaccurate to treat the entire commercial fishing sector as one homogenous user group. The net ban would clearly have had unequal impacts for local residents, dispossessing some families of their livelihoods while further securing the livelihoods of others; this was ultimately avoided because the Alaska state constitution has language that requires equity with respect to how natural resources are allocated (Bolger 2015).

Lam and Pitcher (2012) provide a framework for addressing both social and ecological outcomes in fisheries, defining 'ethical' as fisheries as those that attend to both ecological justice and social justice. The former, ecological justice, involves whether ecosystems are sustained and managed in a precautionary way that attends to species' intrinsic value, whether social systems are adaptive and accommodating to natural fluctuations in abundance, and whether harvest practices are wasteful or destructive to ecosystems. The latter, social justice, involves protecting human rights and equity, including the right to participate in the utilization and conservation of fishery resources, the right to equitable distribution of the benefits of fishing (economic and otherwise), and the right to be compensated when fisheries resources are exploited or harmed by others. With these two forms of justice as goal posts (Fig. 1), it

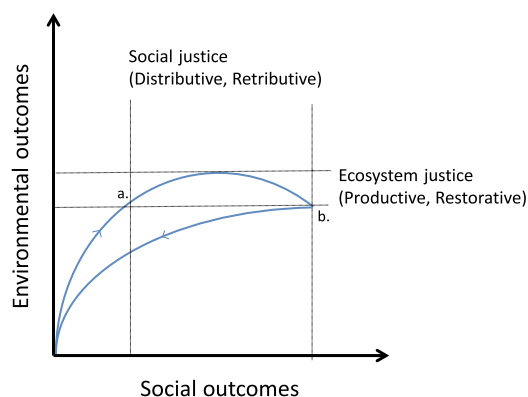


Figure 1 A graphical schematic combining the marginalization–degradation thesis with social and ecosystem justice as described by Lam and Pitcher (2012). The fore-loop (a) illustrates that there are options past the minimum justice thresholds (dashed lines) for social and environmental outcomes to continue to be improved, and also that it is possible to further increase social benefit at the expense of environmental outcomes but without passing below the ecosystem justice threshold. However, if further social benefits continue to be developed and ecosystem justice is compromised, social benefits also will begin to recede. This is the back-loop (b); there is a delay, during which social outcomes are still just but winners and losers are starting to emerge from the degradation. If not addressed, social justice will eventually be compromised and environmental degradation will accelerate. [Colour figure can be viewed at wileyonlinelibrary.com]

becomes possible to identify the social and ecological circumstances in which multiple stakeholders – sport and commercial, small-scale and large – can coexist ethically and sustainably (Loring 2016).

An ethical approach to making parametric changes in fisheries would require that changes such as gear bans proceed in a precautionary way, and not be implemented without sufficient scientific evidence to show that it is necessary to place the burden of conservation disproportionately on one sector of a community. Procedural justice also requires that alternative strategies that better distribute the burden of the conservation be discussed, deliberated and pursued in an inclusive way before a fishery is eliminated altogether (Salz 1998; Kooiman *et al.* 2008). Likewise, an ethical approach must be attuned to individual level and community-level impacts of any changes, including both economic and non-economic dimensions (e.g. Pollnac *et al.* 2006). To that end, I suggest here as a starting point a simple set of questions

that can guide the thoughtful consideration of how parametric management changes may impact social justice (after Loring and Harrison 2013):

1. Will this change interact with fishers' material needs, through effects on access, allocation and distributional equity?
2. Will this change interact with or perhaps undermine intergenerational pedagogy or existing social networks, rules and norms?
3. Will this change impact the individual fishers' relationship with families, peers, their profession and the fishery?
4. On what existing social protections can those impacted rely to cope in the short term and adapt in the long term to these changes? What steps will be necessary to mitigate negative social and economic impacts?

It is generally argued that fisheries resources are entrusted to the state to be managed for the common good as an extension of the public trust doctrine (Criddle 2008). Interpretations of this doctrine have changed over time, however, with the state focusing increasingly on the scientific aspects of sustaining fisheries at the expense of protecting equity (Macinko 1993). In other words, the state has made the challenge of sustaining fisheries more legible by applying a neoliberal lens that commodifies the fish and oversimplifies the fisher (Pinkerton and Davis 2015). Yet, public trust doctrine arguably requires attention to issues of equity as well (Macinko 1993). Prioritizing the questions suggested above, and better engaging with both social scientists and local peoples throughout the decision-making process, would put social justice outcomes on a more equal footing with economic and ecological outcomes.

Conclusion

It is evident in these cases that when societies struggle to achieve sustainable fisheries, they are also simultaneously struggling to define the socially acceptable uses of fisheries: whether fish ought to be allocated to tourism, local food systems, commerce and export, or some combination of the three. This dialogue is an important part of deliberative democracy, but what these two cases illustrate is that social justice is not always a part of the conversation. This is troubling given the immense number of people worldwide who rely on small-scale fisheries for their lives and livelihoods. Alaska is an interesting and encouraging example

in this regard, because as noted, its state constitution contains language requiring equity in how natural resources are allocated. In the case of the set-net fishery, this piece of public policy contributed to a more equitable outcome than experienced in Florida, although the provision has not, overall, been enough to ensure equitable outcomes in all of the state's fisheries (Loring 2013).

What I seek to emphasize here with these two cases is that many, if not all decisions in fisheries have a political dimension, and this is especially the case for parametric decisions. Accounting for this fact, and ensuring that equity is not compromised either unintentionally or through the political machinations of special interests, is essential for achieving fisheries that are sustainable and just. What this requires, however, is that we reintegrate the oft-separated spheres of fisheries governance and fisheries management, such that people's needs and values can be considered in the same conversation, and with the same weight, as environmental circumstances. There is some irony in the fact that the state implements legibility as a way to ensure just outcomes, but in so doing, it creates space for inequities to emerge. Some have argued that the state may not be necessary at all for the effective management of resources (Scott 2014); I am not carrying the argument this far, but at a minimum, it is evident that an ethical approach fisheries does require that the state learn to be flexible with the concepts and categories it uses to govern fisheries, sacrificing some level of legibility in favour of solutions that meet local needs and insure that people do not have to fear for their well-being, even in extreme cases where sustainability requires that specific fishing practices or gear types be changed or abandoned.

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THE CAPE WIND OFFSHORE WIND ENERGY PROJECT: A CASE STUDY OF THE DIFFICULT TRANSITION TO RENEWABLE ENERGY

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DAWN STOLFI STALENHOEF, ESQ.†

I. INTRODUCTION

The BP Gulf disaster gave us pause for many reasons, including the tragic loss of human life, the untold impacts to natural resources and the environment, the exposure of numerous shortcomings related to our piecemeal regulatory system, the discord between state and federal oversight, and corporate cost savings measures implemented at the expense of safety and sound engineering. The events that unfolded in the Gulf of Mexico, before the eyes of world, were a harsh reminder of the global imperative to minimize reliance on fossil fuels for our energy needs.

This article presents the story of one renewable energy alternative

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The views expressed here are the authors' personal views, and not necessarily the views of the Commonwealth of Massachusetts.

that is available wherever the wind blows strong and steady. If that alone is not sufficient enticement to read further, the authors also promise to present one of the most engaging permitting sagas ever known to this field. Indeed, the Cape Wind Energy project was held captive by the permitting process for nearly a decade – in stark contrast to numerous offshore oil projects – due to the imposition of disproportionately rigorous regulatory scrutiny and the dogged political pressure applied by a few wealthy homeowners with ocean views in the direction of the proposed wind farm.

As we collectively consider “new priorities,” renewable offshore energy projects like Cape Wind should be at the top of our list. The experience of Cape Wind in navigating the rough seas of state and federal permitting, and in many cases blazing a trail for future project proponents, is as instructive as it is compelling.

This article addresses Cape Wind, the nation’s first offshore wind energy project proposed for Nantucket Sound in federal waters adjacent to Massachusetts. Part I provides an overview of the project and its importance and describes its long and complicated permitting path. Part II analyzes how the Cape Wind experience highlights flaws in the federal permitting process and offers recommendations for remedying those flaws. Part III describes the complex jurisdictional issues that Cape Wind faced because the wind turbines are proposed to be located in federal waters, while the electric cables that transmit the electricity to the mainland would lie in the seabed of state waters. Part III also analyzes the federal and state court opinions, and relevant statutory authority, that ultimately resolved the jurisdictional disputes. Part IV concludes with a brief summary of Cape Wind’s long-term prospects.

II. THE PERMITTING OF CAPE WIND

*Lately it occurs to me, what a long, strange trip it's been.*¹

A. WHY CAPE WIND MATTERS

If completed, the Cape Wind offshore wind energy project would be one of the largest offshore wind farms in the world. The project is also one of the most significant greenhouse gas (GHG) reduction measures in our nation. It would reduce GHG emissions by an estimated 730,000 tons

¹ GRATEFUL DEAD, *Truckin'*, on AMERICAN BEAUTY (Warner Bros. 1970).

per year, which is the equivalent of taking 175,000 cars off the road each year.²

Due to its size, novelty, and colorful permitting history, the project has become a symbol of the United States' resolve to take action to reduce its greenhouse gas emissions and its dependence on fossil fuels. However, if the project is not constructed, either because of the aesthetic concerns of tenacious beachfront property owners who oppose the project or because of its large up-front costs, the world may well begin to question the United States' commitment to doing its part to avert climate change.

The project is a bellwether for the nascent offshore wind industry. The Cape Wind developers have invested over \$40 million³ and pursued the necessary permits for almost ten years. If Cape Wind never comes to fruition, many will question whether the financial markets will be willing to invest scarce capital in offshore wind.

The project also highlights the issue of where to locate wind energy facilities. There is an ongoing national debate concerning whether to build wind power facilities near "load centers," i.e., where high concentrations of people reside and demand energy. One of the advantages of Cape Wind is that it is located only five miles from the eastern seaboard, which is densely populated and has high electricity demand. In contrast, there is sufficient land available to build wind farms of Cape Wind's size in sparsely populated areas such as the Great Plains. However, these areas are typically far away from load centers, which inevitably leads to higher transmission costs and line leakage.⁴

B. PERMITTING HISTORY

The Cape Wind project is proposed for "Horseshoe Shoals" in

² Statement from Ian Bowles, Sec'y, Mass. Exec. Office of Energy & Env'tl. Affairs (Mar. 30, 2007) (announcing that he had signed the Certificate on the Final Environmental Impact Report for Cape Wind Project); *see also* Press Release, Dep't of Interior, Secretary Salazar Announces Approval of Cape Wind Energy Project on Outer Continental Shelf off Massachusetts (Apr. 28, 2010), *available at* www.doi.gov/news/doinews/Secretary-Salazar-Announces-Approval-of-Cape-Wind-Energy-Project-on-Outer-Continental-Shelf-off-Massachusetts.cfm.

³ Jim Efstathiou Jr., *Salazar Signs Cape Wind Lease*, BLOOMBERG BUSINESSWEEK (Oct. 6, 2010), *available at* www.businessweek.com/news/2010-10-06/salazar-signs-cape-wind-lease-first-for-u-s-waters.html.

⁴ Ian Bowles, Op-Ed., *Home-Grown Power*, N.Y. TIMES, Mar. 7, 2009, at A21; Ian Bowles, Sec'y, Mass. Exec. Office of Energy & Env'tl. Affairs, Testimony Before the Subcommittee on Energy and Mineral Resources and the Subcommittee on Insular Affairs, Oceans and Wildlife 2 (Mar. 24, 2009), *available at* www.mass.gov/Eoeea/docs/eea/press/testimony/2009_nat_res_ibowles.pdf.

Nantucket Sound, a large body of water bordered by the southern beaches of Cape Cod and the islands of Martha's Vineyard and Nantucket.⁵ The project consists of 130 turbines placed within a twenty-five-square-mile area.⁶ The turbines are located in federal waters, approximately five miles south of the Cape Cod town of Yarmouth, nine miles northeast of Martha's Vineyard, and thirteen miles north of Nantucket.⁷ The turbines would stand 440 feet tall and generate electricity that would be transmitted to the mainland of Cape Cod via electric cables buried beneath the seabed.⁸ The project has a nameplate capacity of 468 megawatts of power (about the same amount of electricity as a medium-sized natural gas plant). It could supply on average roughly 75% of the electricity needs of Cape Cod, Nantucket Island and Martha's Vineyard, or roughly 200,000 homes.⁹ In comparison, the next biggest existing offshore wind facility in the world, located offshore in the United Kingdom, has a nameplate capacity of 300 megawatts.¹⁰

With the important exception of the project opponents, most observers agree that Horseshoe Shoals is an ideal location for the nation's first offshore wind facility. Wind speed is the key variable, as the energy produced from wind is proportional to the cube of the wind speed.¹¹ The wind speeds in Nantucket Sound are high, averaging 19.75 miles per hour (mph),¹² which is considered "outstanding" from a technical perspective.¹³ As compared to onshore wind, the so-called "capacity" factor is also high, at 37%. This means that 37% of the time,

⁵ A site map can be found at www.doi.gov/news/doinews/images/CapeWindMap_1.jpg.

⁶ Ian Bowles, Mass. Exec. Office of Energy & Env'tl. Affairs, Certificate of the Secretary of Environmental Affairs on the Final Environmental Impact Report 2 (Mar. 2007), available at www.capewind.org/downloads/feir_cert.pdf [hereinafter FEIR CERT.].

⁷ Map of Cape Wind Site, Dep't of Interior, available at www.doi.gov/news/doinews/images/CapeWindMap_1.jpg (last visited Apr. 10, 2011).

⁸ DEP'T OF INTERIOR, MINERALS MANAGEMENT SERVICE (NOW BUREAU OF OCEAN ENERGY MANAGEMENT, REGULATION AND ENFORCEMENT), RECORD OF DECISION, CAPE WIND ENERGY PROJECT, HORSESHOE SHOALS, NANTUCKET SOUND 3 (Apr. 2010), available at www.doi.gov/news/doinews/upload/Cape-Wind-ROD.pdf [hereinafter RECORD OF DECISION].

⁹ *Id.*

¹⁰ *Thanet Offshore Wind Farm*, VATTENFALL, available at www.vattenfall.co.uk/en/thanet-offshore-wind-farm.htm (last updated Mar. 16, 2011).

¹¹ DANISH WIND INDUSTRY ASSOCIATION, available at guidedtour.windpower.org/en/tour/wres/enrspeed.htm (last visited Apr. 11, 2011).

¹² FEIR CERT., *supra* note 6, at 2-13.

¹³ SUSAN F. TIERNEY, ANALYSIS GROUP, INC., STRATEGIC OPTIONS FOR INVESTMENT IN TRANSMISSION IN SUPPORT OF OFFSHORE WIND DEVELOPMENT IN MASSACHUSETTS 2-3 (Dec. 2009), available at www.analysisgroup.com/uploadedFiles/Publishing/Articles/Strategic_Options_Offshore_Wind_12-01-09.pdf.

the wind speeds are optimal for this facility, as compared to 33-34% for onshore wind.¹⁴ Moreover, the wind blows strongest in Nantucket Sound at precisely the times of peak energy demand—on hot summer and cold winter days.¹⁵

Because the site is five miles from shore, the turbines would be just visible, even on very clear days.¹⁶ They would not be visible at all when there is ocean fog, for which Nantucket Sound is well-known.¹⁷ Despite its distance from land, the site is located in shallow waters (depths between twelve and fifty feet),¹⁸ enabling the facility to use existing “monopole” technology, which has already been implemented successfully in Europe. In contrast, the technology for installing wind turbines in deeper waters is still in an experimental stage.¹⁹

The site at Horseshoe Shoals is not considered an important commercial fishery; it is not listed as important habitat for any rare marine species, and it is not located within a busy navigational channel.²⁰ One observer well-versed in offshore wind has commented, “Jim Gordon [CEO of Cape Wind] has picked the only good location in the east for a wind farm using proven technology.”²¹

Notwithstanding the apparent advantages of this site, opposition to the project has been fierce. Project opponents included the late Senator Edward Kennedy, whose family’s famous compound in Hyannis would face the project. Also in opposition are many well-heeled property owners, such as Bill Koch, who made a fortune in fossil-fuel-based industries and opposes the Cape Wind project on aesthetic grounds. Koch and others have funded a nonprofit entity named the Alliance to Protect Nantucket Sound (the Alliance), which has reportedly spent more

¹⁴ Mass. Dep’t of Pub. Utils., DPU 10-54, Decision on Petition of Massachusetts Electric Company and Nantucket Electric Company 229 n.181 (Nov. 22, 2010), *available at* www.env.state.ma.us/dpu/docs/electric/10-54/112210dpufnord.pdf.

¹⁵ *Id.* at 190.

¹⁶ See visual simulations contained in a document titled Visual Impact Assessment of Revised Layout on Multiple Historic Properties, *available at* www.boemre.gov/offshore/PDFs/VisualImpactRevised.pdf.

¹⁷ DEP’T OF INTERIOR, BUREAU OF OCEAN ENERGY MGMT., REGULATION & ENFORCEMENT, CAPE WIND ENERGY PROJECT, DRAFT ENVIRONMENTAL IMPACT STATEMENT VOL. 1 5-200 (Jan. 2008), *available at* www.boemre.gov/offshore/renewableenergy/DEIS/Volume%20I%20-%20Cape%20Wind%20DEIS/Cape%20Wind%20DEIS.pdf (ocean fog present approximately 200 days per year) [hereinafter DEIS].

¹⁸ RECORD OF DECISION, *supra* note 8, at 16.

¹⁹ *Id.*

²⁰ *Id.* at 16-25, 72-74.

²¹ Pers. cv. with Greg Watson, Senior Advisor, Clean Energy Technology, Mass. Exec. Office of Energy & Env’tl. Affairs, 2010. Greg Watson is also the Chair of Offshore Wind Energy Collaborative, which studied Cape Wind.

than \$15 million over the last ten years,²² opposed the project in numerous administrative venues, and filed approximately ten different lawsuits – all in its effort to stop the project.²³

The permitting of this project was long, expensive, and gruelingly divisive. As mentioned, Cape Wind sought permits for almost ten years until they were finally issued in 2010. One reason the permitting was so difficult is that Cape Wind was attempting to do something that had never been done before in the United States—construct an offshore wind farm. But as discussed in more detail below, the delay and expense had more to do with the tenacity of the opponents, the multitude of federal laws and permit processes and, until recently, the lack of sufficient resolve of state and federal regulators to make the necessary choices on a timely basis.

The formal permitting of the project began in 2001, when Cape Wind commenced its environmental review under the National Environmental Policy Act (NEPA) and the state version of that law, the Massachusetts Environmental Policy Act (MEPA).²⁴ At that time, the lead federal agency was the Army Corps of Engineers (the Corps), which had permitting authority over the project because it involved the dredging and filling of federal waters under section 404 of the Clean Water Act and the placement of structures under the seabed, which are regulated by the Rivers and Harbors Act.²⁵ Massachusetts recognized early on that its jurisdiction was limited to the electric cables, which would lie in state waters, while the Corps had jurisdiction over both the cables and the wind turbines, which were to be located in federal waters.²⁶ The one important exception to this was the state Office of Coastal Zone Management (CZM), which had the authority under the Coastal Zone Management Act (CZMA)²⁷ to review the impact of the turbines in state waters and determine whether the permitting of the turbines would be consistent with Massachusetts’ “enforceable” policies governing coastal development.²⁸ The role of the CZMA will be

²² Eliza Krigman, *Will The Winds Favor Cape Wind?*, NAT’L J., Feb. 21, 2009, available at nationaljournal.com/magazine/will-the-winds-favor-cape-wind--20090221?mrefid=site_search.

²³ Author Kimmell’s personal observation.

²⁴ National Environmental Policy Act, 42 U.S.C.A. §§ 4321-4370f (Westlaw 2011); Massachusetts Environmental Policy Act, MASS. GEN. LAWS ANN. ch. 30, §§ 61-62I (Westlaw 2011); FEIR CERT., *supra* note 6, at 3.

²⁵ Army Corps of Eng’rs, Cape Wind Energy Project Permit Application Cape Wind Associates, LLC, www.nae.usace.army.mil/projects/ma/capewind.htm (last visited Apr. 10, 2011).

²⁶ FEIR CERT., *supra* note 6, at 4.

²⁷ Coastal Zone Management Act, 16 U.S.C.A. §§ 1451-1466 (Westlaw 2011).

²⁸ FEIR CERT., *supra* note 6, at 2.

discussed in greater detail in Part II of this Article.

One early auspicious sign for the project was that the Massachusetts MEPA office and the Corps initially agreed to conduct a joint environmental review, allowing for coordination of information gathering, public comment periods, and timelines for state and federal agency action.²⁹

However, early on the opponents fought back hard. Among other things, the opponents' allies in Congress began a multi-year process of throwing roadblock after roadblock in the path of Cape Wind's permitting. In the summer of 2002, Senator Kennedy proposed an amendment to an energy bill that would have required a National Academy of Sciences study of renewable energy in the outer continental shelf to be conducted before any offshore facilities could be permitted.³⁰ In 2005, an amendment proposed by Senator John Warner (R-Virginia) to H.R. 1815 (the Defense Reauthorization Bill) called for a study of how wind projects might affect military radar systems,³¹ despite previous studies reportedly having shown it is not a problem.³² If the legislation had passed as amended by Senator Warner, there would have been a moratorium on the Corps' review of all offshore wind projects until the completion of the study. The purported goal of the legislation was to change the process for approving offshore energy projects and prohibit projects from moving forward until Congress established new regulations.³³ Although initially it seemed a curious alliance between Warner and Kennedy, it was eventually revealed that Senator Warner had family and friends with property on Cape Cod.³⁴

In 2006, amendments pertaining to Cape Wind were added to the

²⁹ FEIR CERT., *supra* note 6, at 4.

³⁰ Mandy Locke, *Wind Farm Test Tower Wins Approval*, VINEYARD GAZETTE, Aug. 23, 2002, available at www.mvgazette.com/news/2002/08/23/wind_farm_test_tower.php.

³¹ See generally Energy Efficiency and Renewable Energy Legislation in the 109th Congress, CRS Report for Congress 22 (June 2, 2006), available at fpc.state.gov/documents/organization/68283.pdf.

³² See AWEA Statement on "here we go again," Anti-wind Amendments in Coast Guard and Defense Legislation (Nov. 28, 2005), available at 97.74.195.121/newsroom/releases/AWEA_statement_here_we_go_again_antiwind_112805.html.

³³ Froma Harrop, *Why Liberals are Turning on Ted Kennedy*, REAL CLEAR POLITICS (Sept. 4, 2007), available at www.realclearpolitics.com/articles/2007/09/why_liberals_are_turning_on_te.html; see also Timothy Barmann, *Amendment to Defense Bill Would Stall Cape Wind Project*, THE PROVIDENCE J., Oct. 7, 2004, available at johnrsweet.com/personal/Wind/PDF/WarnerAmendmentArticle-20041007.pdf.

³⁴ *Don Young Makes Sneaky Move to Kill Wind Power Project*, SOUTH COAST TODAY, Feb. 24, 2006, at A14, available at www.southcoasttoday.com/apps/pbcs.dll/article?AID=/20060224/OPINION/302249924&cid=sitesearch; see also Barmann, *supra* note 33.

U.S. Coast Guard Reauthorization Bill in closed-door sessions (after the bills had passed both the full House and Senate, and went to conference to reconcile differences between the House and Senate versions of the bill). One such amendment, proposed by Congressman Don Young (R-Alaska), would have required a 1.5 mile buffer between the turbines and any shipping and ferry routes, despite the fact that “[t]he current rule on offshore oil and gas rigs allows them to be 500 feet from a shipping channel [and the] Cape Wind turbines would be at least 1,500 feet from the main shipping channel through Nantucket Sound.”³⁵ Another amendment, proposed by Senator Ted Stevens (R-Alaska), called for the Coast Guard Commandant to review offshore wind projects for “navigational safety,” despite the fact that the Coast Guard was already consulted on that topic during the NEPA environmental-impact-statement process. Moreover, Senator Stevens proposed language that would have given the Governor of Massachusetts (then Mitt Romney, an opponent of Cape Wind) veto power over the project.³⁶ It was reported that the proposed language had been offered by Senator Stevens at the request of Senator Kennedy.³⁷

While all of these legislative efforts ultimately failed, they added great cost and uncertainty to the project and likely would have achieved their desired objective—inducing Cape Wind’s backers to abandon the project—but for the tenacity and resilience of Jim Gordon, Cape Wind’s CEO.

Despite these legislative efforts, the state and federal agencies continued to make progress in the environmental review of the project.

³⁵ *Id.*; see, e.g., Letter from James S. Gordon to Representative Don Young (Feb. 21, 2006), available at www.capewind.org/downloads/Don_Young_022106.pdf.

³⁶ Ian Fein, *Standoff Ends on Cape Wind*, VINEYARD GAZETTE, July 7, 2006, available at www.mvgazette.com/article.php?3891; Robert Peltier, *Backroom Deals*, POWER MAGAZINE, June 15, 2006, available at www.powermag.com/issues/departments/speaking_of_power/Backroom-deals_512.html; see, e.g., House Report on Coast Guard and Maritime Transportation Act of 2006, §§ 404, 414, H.R. Rep. No. 109-413, at 20-21, 25-26 (2006), reprinted in 2006 U.S.C.C.A.N. 579, available at www.gpo.gov/fdsys/pkg/CRPT-109hrpt413/pdf/CRPT-109hrpt413.pdf.

³⁷ Tina Seeley, *White House Opposes Law Killing Wind-Power Project (Update1)*, BLOOMBERG, (May 5, 2006), available at www.bloomberg.com/apps/news?pid=newsarchive&sid=aS0zVljTeVr0 (noting comments by Cape Wind spokesman, Mark Rodgers); Kevin Dennehy & David Schoetz, *White House Opposes Move to Scrap Cape Wind*, CAPE COD TIMES, May 6, 2006, available at www.capecodonline.com/apps/pbcs.dll/article?AID=/20060506/NEWS01/305069946&cid=sitesearch; *Cape Wind and Pork-Barrel Politics*, THE WASHINGTON TIMES (May 7, 2006), available at www.washingtontimes.com/news/2006/may/7/20060507-094115-8137r/; Glen Johnson, *Romney, Healey, Reilly Criticized on Cape Wind*, SOUTH COAST TODAY, Feb. 25, 2006, at A03, available at www.southcoasttoday.com/apps/pbcs.dll/article?AID=/20060225/NEWS/302259980&cid=sitesearch.

Working cooperatively, the state MEPA office and the Corps prepared a “scope” for the joint draft environmental impact report/environmental impact statement.³⁸ After an extensive public outreach process, Cape Wind was required to assess the project’s impacts on birds, fish and marine life, commercial and recreational fishing, visual effects, noise, and historical/archeological properties.³⁹ Cape Wind was also tasked with identifying alternatives to the project, such as alternative renewable energy technologies, a land-based alternative, a shallow-water alternative in Nantucket Sound, and a deep-water alternative south of Martha’s Vineyard.⁴⁰

By 2004, the project had gained some momentum, as the Corps released a generally favorable draft environmental impact statement (DEIS).⁴¹ The project then encountered significant setbacks.

For some time, opponents of the project had objected on the grounds that there had been no underlying formal planning or leasing process. Cape Wind had simply located a site, staked a flag on it, as it were, and began permitting as if it had the necessary property rights. In response, Congress enacted the Energy Policy Act (EPACT), which created a leasing process for offshore wind in federal waters.⁴² Under EPACT, the Marine Minerals Service (MMS) of the Department of Interior, the federal agency that issues oil and gas leases in the outer continental shelf, would also issue leases for offshore wind energy.⁴³ While this legislation can be deemed a legitimate effort to establish a rational and orderly process for federal permitting of offshore wind facilities, one might also suspect that the legislation was intended to take the permitting authority away from the Corps, which seemed to favor the project at that time and had approved a draft environmental impact report.

³⁸ ARMY CORPS OF ENG’RS, ENVIRONMENTAL IMPACT STATEMENT, SCOPE OF WORK, WIND POWER FACILITY PROPOSED BY CAPE WIND ASSOCIATES, LLC, *available at* www.nae.usace.army.mil/projects/ma/ccwf/windscope.pdf (last visited Apr. 10, 2011). *See generally* 42 U.S.C.A. § 1501.7 (Westlaw 2011), which defines scoping as “an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to the proposed action.”

³⁹ ARMY CORPS OF ENG’RS, *supra* note 38.

⁴⁰ *Id.*

⁴¹ ARMY CORPS OF ENG’RS, CAPE WIND ENERGY PROJECT, DRAFT ENVIRONMENTAL IMPACT STATEMENT, *available at* www.nae.usace.army.mil/projects/ma/ccwf/deis.htm (last visited Apr. 11, 2011).

⁴² Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (Aug. 8, 2005), 42 U.S.C.A. §§ 15801-16538 (Westlaw 2011).

⁴³ For a succinct overview of this statutory change, see Final Rule, Department of the Interior, Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf, 74 Fed. Reg. 19,638-39 (Apr. 29, 2009).

Although EFACT provided a limited “grandfathering” for Cape Wind, the project essentially had to start the federal permitting process all over.⁴⁴ The MMS decided not to accept the DEIS that had been prepared by the Corps and to draft its own report instead.⁴⁵ This alone delayed the project for several years.

In the meantime, state permitting of the project encountered heavy resistance led by Governor Romney. On one occasion, Governor Romney orchestrated a highly publicized press conference on a Cape Cod beach, during which he vowed to stop the project.⁴⁶

Under Massachusetts state law, the Energy Facilities Siting Board (the Siting Board) has jurisdiction to permit the cables that would transmit the electricity from the turbines in federal waters through state waters and to the mainland.⁴⁷ Although the Siting Board had routinely approved a number of undersea electric cable projects before, it was strangely reluctant to approve this one.⁴⁸ Permitting of the Cape Wind cables, which even the project opponents conceded would have no significant adverse environmental impacts, ultimately took over three years.⁴⁹

The cables were also met with another legal obstacle: Massachusetts tidelands law. The Massachusetts Department of Environmental Protection’s ambiguous regulations were interpreted to mean that the electric cables were not a “water-dependent” use.⁵⁰ This spelled trouble, because the Department’s regulations disallowed licenses for uses in

⁴⁴ Dep’t of Interior, Minerals Management Service (now Bureau of Ocean Energy Management, Regulation and Enforcement) Office of Public Affairs, Efforts to Reach a Decision on the Cape Wind Energy Project, *available at* www.doi.gov/news/doinews/upload/Fact-Sheet-Cape-Wind-with-SOL-edits-04-28-10.pdf (last visited Apr. 11, 2011). *See generally* the Saving Provision of the Energy Policy Act of 2005, Pub. L. 109-58, 119 Stat. 594, 747 (providing that nothing in the Act “requires the resubmittal of any document that was previously submitted or the reauthorization of any action that was previously authorized with respect to a project for which, before the date of enactment of this Act – (1) an offshore test facility has been constructed; or (2) a request for a proposal has been issued by a public authority.”). Cape Wind was “grandfathered” to the extent that it was not required to resubmit previously submitted documents; however, it was required to submit additional documentation and endure additional scrutiny under an expanded federal review.

⁴⁵ Dep’t of Interior, *supra* note 44.

⁴⁶ Walter Brooks, *Run, Romney Run*, CAPECODTODAY.COM (Mar. 19, 2005), *available at* www.capecodtoday.com/modules.php?op=modload&name=News&file=article&sid=095.

⁴⁷ MASS. GEN. LAWS ANN. ch. 164 § 69J (Westlaw 2011).

⁴⁸ Author Kimmell’s personal observation.

⁴⁹ Mass. Energy Facilities Siting Bd., EFSB 02-2, Final Decision on the Matter of the Petition of Cape Wind Associates, LLC and Commonwealth Electric Company d/b/a NSTAR Electric for Approval to Construct Two 115 kV Electric Transmission Lines (May 11, 2005), *available at* www.mass.gov/Eoca/docs/dte/siting/efsb02-2/cwfp1-67.pdf.

⁵⁰ 310 MASS. CODE REGS. 9.12(1)(b) (Westlaw 2011).

submerged tidelands unless the uses were water-dependent.⁵¹ In order to obtain a license, Cape Wind would need a variance which is time-consuming and difficult to obtain.⁵²

By 2005, the project faced a highly uncertain future. However, in 2006 when Deval Patrick was elected Governor of Massachusetts, the tide shifted back in favor of the project. As a candidate, Patrick had backed the Cape Wind project.⁵³ And as Governor, he appointed Ian Bowles, a strong clean-energy supporter, as his Secretary of the Executive Office of Energy and Environmental Affairs.⁵⁴

The election results fundamentally changed the landscape of the state-level permitting process. In March 2007, Massachusetts approved the final environmental impact report,⁵⁵ which then allowed the state's permitting agencies to issue permits for the cables. In 2008, the state revised its tideland regulations to specify that electric cables that connect to offshore wind turbines are water-dependent and therefore licensable under state tidelands law.⁵⁶

However, the project then ran into interference from the Cape Cod Commission (Commission), a regional planning agency that shared jurisdiction over the electric cables with the state. The Commission was clearly reluctant to approve Cape Wind's electric cables, even though they were functionally indistinguishable from other cables in Nantucket Sound that bring electricity to the islands of Nantucket and Martha's Vineyard.⁵⁷ Rather than deny the cables outright, the Commission demanded extensive additional information, including information on the wind turbines themselves, despite the fact that the turbines were outside of the Commission's jurisdiction.⁵⁸ The Commission also balked at making a decision until the federal environmental review was completed even though that review was focused on the turbines outside of the

⁵¹ 310 MASS. CODE REGS. 9.32(1)(a)2 (Westlaw 2011).

⁵² 310 MASS. CODE REGS. 9.21 (Westlaw 2011).

⁵³ See, e.g., Deval Patrick, Democrat for Governor, *Moving Massachusetts Forward, Energy Independence and Environmental Stewardship* (Oct. 18, 2005), available at mehrco.web.officelive.com/Documents/Deval Patrick on municipal utilities.pdf; Jack Coleman, *Deval Patrick to Endorse Cape Wind*, CAPE COD TODAY, Oct. 17, 2005, available at www.capecodtoday.com/news259.htm.

⁵⁴ See, e.g., *Official Patrick Administration Cabinet Announcement*, THE BOSTON GLOBE, Dec. 15, 2006, available at www.boston.com/news/globe/city_region/breaking_news/2006/12/official_patric_1.html#.

⁵⁵ FEIR CERT., *supra* note 6.

⁵⁶ 310 MASS. CODE REGS. 9.12(b) (Westlaw 2011).

⁵⁷ Author Kimmell's personal observation.

⁵⁸ *Id.*

Commission's jurisdiction.⁵⁹ When Cape Wind refused to further extend the timeline to allow for this additional review, the Commission denied a permit for the cables.⁶⁰

The project proponents had recourse. Under a law enacted amidst the energy crisis of the early 1970's, the Massachusetts Energy Facilities Siting Board had the authority to "override" local denial of an energy facility permit and issue a composite permit that covered all the necessary approvals under state law.⁶¹ The Siting Board—the same agency that under Governor Romney had delayed issuing an approval for the electric cables for three years—issued a decision in 2009 overriding the Commission's rejection of the project.⁶²

The permitting at the federal level, however, remained a serious obstacle. Although the Cape Wind environmental impact reports dealt comprehensively with the issues and demonstrated that Horseshoe Shoals was the superior site, federal permitting was delayed for another eighteen months due to an expansive historic review process under section 106 of the National Historic Preservation Act.⁶³

Section 106 provides that when a federal action may have a significant adverse effect on properties that are listed or eligible for listing on the National Historic Register, the federal permitting agency (here, the MMS) has to consider the effect of the federal action on such properties. The agency must also consult with the State Historic Preservation Officer (SHPO) and others whose properties may be affected.⁶⁴

During the environmental review process, Cape Wind evaluated the potential historic impacts of the project as required by state and federal authorities. Cape Wind identified twenty-eight properties of historic significance along south-facing beaches of Cape Cod and areas in Martha's Vineyard and Nantucket with potential views of the project; and then the Minerals Management Service added a twenty-ninth property.⁶⁵ Cape Wind simulated the views of the turbines from locations

⁵⁹ *Id.*

⁶⁰ Decision of the Cape Cod Commission, Oct. 18, 2007, Development of Regional Impact, Project JR 20084.

⁶¹ MASS. GEN. LAWS ANN. ch. 164, § 69K (Westlaw 2011).

⁶² Final Decision, EFSB 07-08.

⁶³ 16 U.S.C.A. § 470 (Westlaw 2011).

⁶⁴ 16 U.S.C.A. §§ 470(a), (f) (Westlaw 2011).

⁶⁵ DEP'T OF INTERIOR, MINERALS MANAGEMENT SERVICE (NOW BUREAU OF OCEAN ENERGY MANAGEMENT, REGULATION AND ENFORCEMENT), DOCUMENTATION OF SECTION 106 FINDING OF ADVERSE EFFECT 30, tbl.4.1 (Brandi M. Carrier Jones ed., 2008), available at www.boemre.gov/offshore/RenewableEnergy/PDFs/FAE_Final.pdf.

representative of these properties.⁶⁶ In general, the simulations showed that on a very clear day, the turbines would be visible at the edge of the horizon from the coastal locations on Cape Cod approximately five miles away, slightly visible from Martha's Vineyard locations (nine miles) and even less visible from Nantucket (thirteen miles).⁶⁷ Although it did not make sense to move the project to another location to mitigate this impact since Horseshoe Shoals was otherwise deemed to be the best site, Cape Wind did make efforts to mitigate the impact by reducing the number of turbines from 170 to 130. It also modified the location to increase the distance from certain historic sites (among them, the Kennedy compound in Hyannis).⁶⁸

Late in the historic consultation process, a new obstacle was thrown in Cape Wind's path. In 2009, the Mashpee Wampanoag Tribe and the Wampanoag Tribe of Gay Head petitioned the MMS to find that *all* of Nantucket Sound—a 600-square-mile water body—be deemed eligible for listing on the National Register of Historic Properties as a “traditional cultural property.”⁶⁹ The tribes contended that they participated in “sunrise ceremonies” in which they viewed the sunrise to the east, and listing all of Nantucket Sound on the Register would protect their ceremonial views from Cape Wind's turbines.⁷⁰

The MMS rejected this claim, finding that Nantucket Sound met none of the criteria for listing. The MMS noted that Cape Wind had performed an extensive archeological search of the seabed and found no artifacts or other evidence of human habitation. The MMS also cited published guidance from the National Register discouraging the listing of water bodies, because they typically lack defined boundaries and tight connection to a specific cultural practice. Moreover, the MMS found that Nantucket Sound itself was not a sacred site; rather, it was the viewshed from tribal land *over* the sound that was important. However, that view had been studied during the environmental review process and could be addressed without listing all of Nantucket Sound on the National Register.⁷¹

⁶⁶ *Id.* at 10-24.

⁶⁷ *Id.* at 3, fig.2.1 (visual simulations included in the environmental impact statement).

⁶⁸ Press Release, Dept. of the Interior, Secretary Salazar Announces Approval of Cape Wind Energy Project on Outer Continental Shelf off Massachusetts (Apr. 28, 2010), *available at* www.doi.gov/news/doinews/Secretary-Salazar-Announces-Approval-of-Cape-Wind-Energy-Project-on-Outer-Continental-Shelf-off-Massachusetts.cfm.

⁶⁹ Mashpee Wampanoag Tribe 2009-RES-022, Horseshoe Shoal Resolution; Letter from Wampanoag Tribe of Gay Head to National Park Service (Sept. 17, 2009).

⁷⁰ *Id.*

⁷¹ DEP'T OF INTERIOR, MINERALS MANAGEMENT SERVICE (NOW BUREAU OF OCEAN

The Massachusetts SHPO, who is not appointed by the Governor, appealed the MMS's determination to the Keeper of the National Register. The SHPO argued that all of Nantucket Sound should be listed on the register. While noting that no archeological remains had been found, the SHPO claimed that this did not matter, because Nantucket Sound had once been dry land and it could be expected that "Native Americans would have occupied the exposed lands."⁷²

In a highly unusual move, the Keeper of the National Register accepted the theories of the SHPO, overturned the findings of the MMS, and found that all of Nantucket Sound was eligible for listing as a traditional cultural property on the National Register.⁷³

This decision emboldened the project opponents. The consultation process came to an impasse when the Wampanoag tribes and the SHPO refused to engage in a discussion about mitigation and instead insisted that the project start the permitting from scratch at a different location.⁷⁴ The impasse required Secretary of Interior, Kenneth Salazar, to refer the matter to the Advisory Council on Historic Preservation for a recommendation before MMS could issue a decision.

In April 2010, the Advisory Council issued its decision, recommending that the Secretary deny approval of the project.⁷⁵ The Advisory Council opined that views from the twenty-eight historic properties would be harmed, because people viewing these sites would see turbines on a very clear day at the edge of the horizon.⁷⁶ The Council further feared that installing the foundations in the seabed could harm archeological remains, notwithstanding the fact that none had been found at the project site. Additionally, the Council credited the tribes' claim that the wind turbines would mar sunrise ceremonies.⁷⁷

The Advisory Council's letter was met with a well-coordinated and politically powerful response. The governors of six coastal states (Massachusetts, Rhode Island, New York, New Jersey, Maryland and

ENERGY MANAGEMENT, REGULATION AND ENFORCEMENT), NATIONAL REGISTER OF HISTORIC PLACES DETERMINATION OF ELIGIBILITY NOTIFICATION FOR NANTUCKET SOUNDS (Oct. 9, 2009).

⁷² Letter from Brona Simon to Christopher Horrell, at 1 (Nov. 5, 2009). The SHPO also relied on the tribe's history of using the Sound for fishing and navigation, and tribal legends of a giant named Maushop, who was said to have created islands within Nantucket Sound and caused ocean fog with his pipe.

⁷³ DEP'T OF INTERIOR, NATIONAL PARK SERVICE, NATIONAL REGISTER OF HISTORIC PLACES DETERMINATION OF ELIGIBILITY NOTIFICATION FOR NANTUCKET SOUND (Jan. 4, 2010), *available at* www.capecodonline.com/static/pdf/nantucketsound.pdf.

⁷⁴ Author Kimmell's personal observation.

⁷⁵ www.scribd.com/doc/29625545/Cape-Wind-Comments-by-ACHP.

⁷⁶ *Id.*

⁷⁷ *Id.*

Delaware), all of which were entertaining proposals for offshore wind farms, wrote Secretary Salazar to urge rejection of the Council's approach.⁷⁸ The governors stated, "If the [Council's] approach to historic preservation is adopted, it would establish a precedent that will make it difficult, if not impossible, to site offshore wind projects anywhere along the eastern seaboard."⁷⁹ The governors argued that historic protection typically involves preventing the destruction of a historic building, or building a new structure in a historic district that is discordant with the history.⁸⁰ Here, however, the Council was calling for the rejection of Cape Wind not to protect historic buildings or districts, but to protect against views of the wind farm many miles away.

In April 2010, Secretary Salazar rejected the Council's recommendation and issued a Record of Decision⁸¹ that cleared the way for the final permits to be issued in late 2010. At a press conference, when asked to identify the most important consideration to his decision, Secretary Salazar cited the letter from the six governors.⁸²

Once the permitting was completed, the inevitable lawsuits from project opponents followed. The Alliance to Protect Nantucket Sound filed numerous suits challenging the state approvals. Ultimately, the Alliance lost each suit, the state approvals have been affirmed, and all of the lawsuits dismissed.⁸³ The Alliance also has filed numerous suits in federal court challenging approvals by the MMS.⁸⁴ Those suits are still pending.

To summarize: Cape Wind first sought its permits in 2001. It took almost ten years before the permits were finally issued in late 2010. During that time, state regulators were reluctant to permit an otherwise routine electric cable, the federal permitting process changed midstream, and Cape Wind was essentially required to restart the permitting process from scratch. Along the way, numerous attempts were made to kill the project legislatively and through litigation. And several federal agencies assisted the project opponents in delaying and almost derailing the project with unprecedented and expansive notions of historical

⁷⁸ Letter from Governors of Atlantic Coastal States to Ken Salazar, Secretary, Dep't of Interior (Apr. 23, 2010), *available at* multimedia2.heraldinteractive.com/misc/GovernorsLetter.pdf.

⁷⁹ *Id.*

⁸⁰ *Id.*

⁸¹ DEP'T OF INTERIOR, MINERALS MGMT. SERV., RECORD OF DECISION, CAPE WIND ENERGY PROJECT, HORSESHOE SHOAL, NANTUCKET SOUND, (April 28, 2010), *available at* www.boemre.gov/offshore/renewableenergy/PDFs/CapeWindROD.pdf.

⁸² Author Kimmell's personal observation.

⁸³ *Id.*

⁸⁴ *Id.*

protection.

C. REFORMING THE PERMITTING PROCESS

The Cape Wind saga reveals that the current permitting process for offshore wind energy projects is broken. If the nation is serious about developing offshore wind energy projects along its coasts, Congress must advance reform.

One place to look for inspiration, ironically, is Massachusetts. Despite its reputation for long and protracted siting battles, Massachusetts has instituted two major reforms that could serve as models for federal reform of offshore wind-project permitting.

The first model reform is a “one-stop permitting” law that enables the State Energy Facilities Siting Board to issue a single permit and eliminates the need for any additional state or local permits.⁸⁵ Enacted during the energy crisis of the early 1970’s, this law ensures that state and local agencies do not block power plants and infrastructure needed for a reliable energy supply. The law allows the Siting Board to step in when an energy project proponent is denied a necessary permit or experiences significant delays, including those caused by litigation.⁸⁶ The Siting Board has broad representation: it is composed of the Executive Office of Energy and Environmental Affairs, the Department of Environmental Protection, the Department of Energy Resources, the Department of Public Utilities, and three citizen members representing labor, environmental, and consumer interests.⁸⁷ It has wide jurisdiction and can review all of the various impacts of energy facilities that would be examined by state or local permitting agencies. It may also receive the input of all state and local agencies that would otherwise be called upon to grant permits.⁸⁸ This authority ensures that all issues and all possible objections are heard once, rather than multiple times by multiple agencies. And unlike with most permits issued by state agencies, the appeals process is streamlined. Indeed, there is but one appeal of a Siting Board approval, which goes directly to the state Supreme Judicial Court.⁸⁹

As noted above, this law was crucial to the success of Cape Wind’s permitting on the state level, because it ensured that the permitting of the

⁸⁵ MASS. GEN. LAWS ANN. ch. 164, § 69K (Westlaw 2011).

⁸⁶ *Id.*

⁸⁷ MASS. GEN. LAWS ANN. ch. 164 § 69H (Westlaw 2011).

⁸⁸ MASS. GEN. LAWS ANN. ch. 164, §§ 69N, 69O (Westlaw 2011).

⁸⁹ MASS. GEN. LAWS ANN. ch. 164 § 69P (Westlaw 2011).

electric cables would not get bogged down in other state and local level permitting, or be delayed by judicial appeals of such permit decisions. Had this law not been in place, it is likely that Cape Wind would still be in litigation with the Cape Cod Commission over its denial of the electric cables and would be defending the license issued by the Department of Environmental Protection allowing the cables to be placed in Massachusetts' tidelands.

There is no comparable "one-stop permitting" option for offshore wind projects available at the federal level. While the EPACT established that the MMS (now referred to as the Bureau of Ocean Energy Management, Regulation, and Enforcement, or BOEMRE) plays the leading-agency role for issuance of an offshore lease, numerous other federal agencies such as the Army Corps of Engineers, Environmental Protection Agency, Federal Aviation Administration, and the Coast Guard will still need to issue separate approvals for the project. Federal agencies, including the U.S. Fish and Wildlife Service, National Park Service, and the Advisory Council on Historic Preservation, will also play significant "consultative" roles. Rather than having the appeals of the permits lodged in one court, federal law provides for multiple appeals in various federal courts that will have to be resolved before the project can finally proceed. This multiplicity of permitting and consultative agencies, and numerous potential judicial appeals, is a formula for delay, confusion, redundancy, and inconsistency. In short, it is a boon for the forces of inertia.

A second key reform in Massachusetts occurred after Cape Wind entered the scene. Some objected to Cape Wind's proposal because there was no planning process that preceded the project. Instead, as noted, Cape Wind essentially staked out its ground and then requested permits.

To reform this so-called "ad hoc" approach, the Massachusetts legislature passed the Oceans Act of 2008.⁹⁰ The Act directed the Secretary of Energy and Environmental Affairs to prepare an ocean plan to govern the uses of Massachusetts' coastal waters.⁹¹ Among other things, the Act allowed for offshore wind facilities to be constructed in Massachusetts waters, provided they are of "appropriate scale" and are consistent with the plan.⁹²

⁹⁰ 2008 Mass. Acts 114.

⁹¹ MASS. GEN. LAWS ANN. ch. 21A § 4C (Westlaw 2011).

⁹² MASS. GEN. LAWS ANN. ch. 132A § 15(2)(b) (Westlaw 2011); *see, e.g.*, Press Release, Mass. Exec. Office of Energy & Env'tl. Affairs, Patrick Administration Releases Final Blueprint for Managing Development in State Waters (Jan. 4, 2010), *available at* www.mass.gov/?pageID=eoeepressrelease&L=1&L0=Home&sid=Eoeea&b=pressrelease&f=100104_pr_ocean_plan&csid=Eoeea ("Under the Ocean Act and the ocean management plan, the concept

To devise the plan, the Secretary empanelled two stakeholder advisory groups, held approximately eighty public hearings in coastal communities, and collected extensive data on the current uses of the coastal waters. In addition, the Secretary identified areas containing important commercial and recreational fisheries, significant marine mammal habitats, navigational channels and rare bird habitats.⁹³ All of this data was layered in GIS mapping systems that graphically depicted the areas where offshore wind turbines should not be located so as to avoid conflict with competing uses. The mapping revealed that there were two large areas not encumbered by these incompatible uses; an area southwest of Martha's Vineyard, and an area to the west of the small town of Gosnold.⁹⁴ The plan provides that a commercial-scale offshore wind facility is "presumptively" appropriate in these areas and entitled to state permits.⁹⁵ While any project in these areas would still need to obtain state and local permits, the permits would be a mechanism to impose conditions upon the use, rather than deny it altogether.⁹⁶ In essence, the ocean plan is akin to the zoning of coastal waters, such that the designation of certain areas within the coastal waters creates "zones" where wind energy can be pursued as of right (e.g., without the need for a permit or variance).⁹⁷

The advantages of a planning/zoning model over ad hoc permitting are manifest. The planning/zoning process is deliberate and involves the public in decision-making. The process encourages the examination of a wide range of alternative sites and is designed to select the best locations. Once the best locations are selected, the developer is assured of a

of 'appropriate scale' includes such factors as protecting interests associated with fishing, fowling and navigation; insuring public safety; and minimizing incompatibility with existing uses and visual impacts."); *see also* Massachusetts Ocean Management Plan, ch. 2, tbl.2-2 (Dec. 2009) (providing a list of factors to be used by regional planning authorities in defining the "appropriate scale" of a proposed wind energy project).

⁹³ Ian Bowles, Sec'y, Mass. Exec. Office of Energy & Env'tl. Affairs, Cover Letter to Final Massachusetts Ocean Plan (Dec. 31, 2009), *available at* www.env.state.ma.us/eea/mop/final-v1/v1-front.pdf.

⁹⁴ MASS. EXEC. OFFICE OF ENERGY & ENVTL. AFFAIRS, MASSACHUSETTS OCEAN MANAGEMENT PLAN 2-1 to 2-3, Figure 2-1 (Dec. 2009), *available at* www.env.state.ma.us/eea/mop/final-v1/v1-complete.pdf.

⁹⁵ MASS. EXEC. OFFICE OF ENERGY & ENVTL. AFFAIRS, MASSACHUSETTS OCEAN MANAGEMENT PLAN 2-1 through 2-3 (Dec. 2009), *available at* www.env.state.ma.us/eea/mop/final-v1/v1-complete.pdf; *see also* MASS. GEN. LAWS ANN. ch. 132A § 18 (Westlaw 2011) (once the plan is issued, all permitting must be consistent with the plan).

⁹⁶ MASS. EXEC. OFFICE OF ENERGY & ENVTL. AFFAIRS, MASSACHUSETTS OCEAN MANAGEMENT PLAN 2-2 (Dec. 2009), *available at* www.env.state.ma.us/eea/mop/final-v1/v1-complete.pdf.

⁹⁷ *See, e.g.*, Massachusetts Ocean Management Plan, ch. 2.

predictable outcome.

The federal government's process, in contrast, is still driven by the project proponent's individual choice of sites. While there is now a leasing process administered by BOEMRE, the primary function of BOEMRE is to select a lessee that offers the best financial bid.⁹⁸ There is no statutory ocean planning authority under federal law with an agency empowered to make zoning/planning designations of appropriate sites for offshore wind projects. Nor is there any process to assure developers that if they select certain sites and abide by known performance standards, they will receive a permit.⁹⁹

Thus, the Cape Wind experience both highlights the need for reform and provides models for the types of reform that are needed.

III. STATE VERSUS FEDERAL JURISDICTION – A COMPLEX ISSUE

*The sea is no one's private property; rather it is a commons that belongs to all the people, through ownership by the respective coastal States extending three miles from shore.*¹⁰⁰

Future proposals for offshore energy projects will likely trigger both federal and state jurisdiction. As was the case with Cape Wind, even where a turbine installation is located in federal waters, invariably the power will need to be brought to shore via transmission lines running through state waters. When this happens, determining jurisdiction over the project and its corresponding permitting requirements can be challenging. Again, Cape Wind's experience with this arduous process is instructive. This section provides an overview of the statutory and common-law framework governing offshore wind projects, and it analyzes how the jurisdictional issues regarding Cape Wind were resolved by the federal and state courts.

⁹⁸ Final Rule, Department of the Interior, Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf, 74 Fed. Reg. 19,638-39 (Apr. 29, 2009).

⁹⁹ However, President Obama has issued an executive order to establish ocean planning similar to Massachusetts' ocean plan. Jim Tankersley, *Obama to Launch Ocean Initiative*, L.A. TIMES, July 19, 2010, available at articles.latimes.com/2010/jul/19/nation/la-na-obama-ocean-20100719. It remains to be seen what, if any, regulatory significance will attach to this plan, once completed.

¹⁰⁰ Mass. Office of Coastal Zone Mgmt., *The Ocean as a Public Trust Resource*, available at www.mass.gov/czm/oceanmanagement/waves_of_change/pdf/trpt.pdf (last visited Apr. 11, 2011).

A. STATE AND FEDERAL JURISDICTION OVER THE OCEAN

i. *Federal Statutory Authority*

The Submerged Lands Act (SLA) of 1953¹⁰¹ was enacted in response to a U.S. Supreme Court case that had transferred land historically under the control of states into the hands of the federal government. Resolution of the dispute would determine who had title to coastal lands containing valuable oil and mineral deposits. In *United States v. California* (1947), the Court adopted the federal government's view that its responsibility for national defense and international relations concerns gave rise to title that was paramount to the rights of California to the underwater lands located three miles seaward of its shoreline.¹⁰² Congress objected to the Supreme Court's interpretation of coastal rights and passed the SLA to affirm the states' full title to the seabed (i.e., "lands beneath navigable waters") within three geographical miles of their shores.¹⁰³

Pressure for oil and gas exploration rights was also the impetus for passage of the Outer Continental Shelf Lands Act (OCSLA).¹⁰⁴ The OCSLA defines the bounds of federal waters beyond the three-mile SLA zone.¹⁰⁵ It makes the Constitution, laws, and civil and political jurisdiction of the United States fully applicable to the Outer Continental Shelf (OCS) and establishes national rules for the leasing and development of natural resources in the seabed outside of state territory. The OCSLA also provides a federal cause of action for any person aggrieved by a violation of those rules and vests jurisdiction to hear such cases in the federal district courts.¹⁰⁶

ii. *Federal Litigation*

In 2002, members of the Alliance to Protect Nantucket Sound, through *Ten Taxpayers*,¹⁰⁷ sued Cape Wind in state court claiming that it had failed to obtain necessary state permits before erecting a data

¹⁰¹ 43 U.S.C.A. § 1301 et seq. (Westlaw 2011).

¹⁰² *United States v. California*, 332 U.S. 19 (1947).

¹⁰³ 43 U.S.C.A. §§ 1301, 1311, 1312 (Westlaw 2011) (with few exceptions).

¹⁰⁴ 43 U.S.C.A. § 1331 et seq. (Westlaw 2011).

¹⁰⁵ 43 U.S.C.A. § 1331(a) (Westlaw 2011).

¹⁰⁶ 43 U.S.C.A. §§ 1333(a)(1), 1337, 1349(a)(1), (b) (Westlaw 2011).

¹⁰⁷ *Ten Taxpayers Citizen Grp. v. Cape Wind Assocs., LLC*, 278 F. Supp. 2d 98 (D. Mass. 2003).

collection tower in Nantucket Sound, and seeking an injunction to prevent construction of the data tower. Cape Wind removed the case to federal court on the basis of federal question jurisdiction, and the *Ten Taxpayers* plaintiffs moved to remand. They claimed that state jurisdiction relied on authority granted to Massachusetts under federally delegated power to regulate fisheries and fish habitats through the Magnuson-Stevens Act, which requires state approval for structures erected in the Nantucket Sound seabed. They further contended that this authority applied broadly and included any activity that affected fishing in Nantucket Sound. Cape Wind filed a motion to dismiss, attaching two letters from the Massachusetts Department of Environmental Management (the agency possessing the relevant regulatory authority) in which the agency *disclaimed* authority over activities in Horseshoe Shoals, and arguing that the *Ten Taxpayers* plaintiffs lacked standing to assert authority on behalf of the state. On August 19, 2003, the district court granted Cape Wind's motion, holding that although Congress had delegated authority to regulate fisheries in Nantucket Sound to Massachusetts, it was a specific grant of authority and not general regulatory authority over all "environmental disturbances that could impact fishing."¹⁰⁸ No state permits were required where there was no state authority to permit the data tower.

On appeal, the *Ten Taxpayers* plaintiffs argued that there was a lack of subject matter jurisdiction, so the district court should have remanded, and they also appealed the dismissal of their complaint.

The First Circuit decided the appeal in 2004. The court noted that "[t]his case implicates the complex and rather obscure body of law that divides regulatory authority over Nantucket Sound between the state and federal governments."¹⁰⁹ The court recounted the legislative and adjudicatory history that established the jurisdictional divide as it stands today, noting that the OCSLA represents "a sweeping assertion of federal supremacy over the submerged lands outside the three-mile SLA boundary," and that subsequent case law has confirmed this authority.¹¹⁰

In 1976, the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) established that "exclusive fishery management authority" in the OCS rests with the federal

¹⁰⁸ *Ten Taxpayers*, 278 F. Supp. 2d at 101.

¹⁰⁹ *Ten Taxpayer Citizens Grp. v. Cape Wind Assocs., LLC*, 373 F.3d 183 (1st Cir. 2004).

¹¹⁰ *Id.* at 188; *see also* *United States v. Maine*, 420 U.S. 515, 522, 524 (1975) ("control and disposition" of the seabed is "the business of the Federal Government rather than the States," and "paramount rights to the offshore seabed inhere in the Federal Government as an incident of national sovereignty").

government.¹¹¹ It also preserved the authority granted to the states to regulate resources, including fisheries, within the three-mile SLA boundary.¹¹² To further complicate matters of jurisdiction, the geography of Nantucket Sound is such that almost the entirety of the Sound (excepting its center portion, which includes Horseshoe Shoals) is encompassed by Massachusetts' three-mile territorial sea.¹¹³

Although it is true that the U.S. Supreme Court has confirmed that the area beyond three miles from any Massachusetts shore is outside the state's jurisdiction,¹¹⁴ Congress also passed legislation that expanded Massachusetts' authority over the *entire* Nantucket Sound for the purposes of the Magnuson-Stevens Act.¹¹⁵ The *Ten Taxpayers* plaintiffs argued that the expanded jurisdiction under the Magnuson-Stevens Act, which allows Massachusetts to regulate fisheries concerns in the entire Nantucket Sound, also gives rise to broader state authority to regulate construction of Cape Wind's data tower in Horseshoe Shoals.¹¹⁶

Relying on language in the OCSLA, the court affirmed federal question jurisdiction in that the OCSLA subsumes all state law (to the extent it is "applicable and not inconsistent") as if it were federal law, to fill in any gaps that may exist in regulating the OCS.¹¹⁷ Therefore, the *Ten Taxpayers* plaintiffs' claims, "though ostensibly premised on Massachusetts law, arise under the 'law of the United States' under § 1333(a)(2)."¹¹⁸ Regarding their substantive claim as to the relevance of Massachusetts regulations to activity in Horseshoe Shoals, the court readily found that there was no basis for such regulation regarding the activity proposed.

In our view, the OCSLA leaves no room for states to require licenses or permits for the erection of structures on the seabed on the outer Continental Shelf. Congress retained for the federal government the exclusive power to authorize or prohibit specific uses of the seabed

¹¹¹ 16 U.S.C.A. § 1811 (Westlaw 2011).

¹¹² 16 U.S.C.A. § 1856(a)(1) (Westlaw 2011).

¹¹³ Nantucket Sound is surrounded on three 'sides' by mainland Massachusetts, Cape Cod, and the islands of Martha's Vineyard and Nantucket. On the remaining side is a channel that connects the Sound to the open ocean and federal waters. Only the area of Horseshoe Shoals—at the deep center of Nantucket Sound—is outside the reach of the three-mile boundary from any of the Massachusetts shorelines that surround it.

¹¹⁴ See *United States v. Maine*, 475 U.S. 89 (1986).

¹¹⁵ 16 U.S.C.A. § 1856(a)(2)(B) (Westlaw 2011).

¹¹⁶ *Ten Taxpayer Citizens Grp. v. Cape Wind Assocs., LLC*, 373 F.3d 183, 190 (1st Cir. 2004).

¹¹⁷ 43 U.S.C.A. § 1333(a)(2) (Westlaw 2011).

¹¹⁸ *Ten Taxpayer*, 373 F.3d at 193.

beyond three miles from shore. If adopted and enforced on the outer Continental Shelf, statutes . . . [that] require the approval of state agencies prior to construction . . . would effectively grant state governments a veto power over the disposition of the national seabed. That result is fundamentally inconsistent with the OCSLA.¹¹⁹

Moreover, the court noted that the regulatory agency with authority for one of the two relevant permitting schemes had specifically disclaimed authority in this case.¹²⁰ The dismissal of plaintiffs' claims was affirmed, with the court holding that "any Massachusetts permit requirement that might apply to [the data tower] is inconsistent with federal law and thus inapplicable on Horseshoe Shoals under the OCSLA."¹²¹ In the end, *Ten Taxpayers* leaves no room for doubt that the federal government maintains exclusive authority for permitting in the OCS.

B. AUTHORITY TO CONSIDER IN-STATE IMPACTS OF FEDERAL ACTIVITY (IN FEDERAL WATERS)

i. *Public Trust*

The Public Trust Doctrine (PTD)¹²² provides that:

[P]ublic trust lands, waters and living resources in a State are held by the State in trust for the benefit of all of the people, and establishes the right of the public to full enjoy public trust lands, waters and living resources for a wide variety of recognized public uses. The doctrine also sets limitations on the States, the public, and private owners, as well as establishing the responsibilities of the States when managing these public trust assets.¹²³

¹¹⁹ *Ten Taxpayer*, 373 F.3d at 196-97 (citations omitted).

¹²⁰ *Id.* at 195.

¹²¹ *Id.* at 197.

¹²² "Under this doctrine, which has evolved from ancient Roman and English common law, governments have an obligation to protect the interests of the general public (as opposed to the narrow interests of specific users or any particular group) in tidelands and in the water column and submerged lands below navigable waters." U.S. Commission on Ocean Policy, *Primer on Ocean Jurisdictions: Drawing Lines in the Water* 41 (pre-publication copy).

¹²³ COASTAL STATES ORGANIZATION, *PUTTING THE PUBLIC TRUST DOCTRINE TO WORK: THE APPLICATION OF THE PUBLIC TRUST DOCTRINE TO THE MANAGEMENT OF LANDS, WATERS AND LIVING RESOURCES OF THE COASTAL STATE I* (2d ed. June 1997), available at media.coastalstates.org/Public%20Trust%20Doctrine%202nd%20Ed%20%201997%20CSO.pdf.

Numerous federal and state cases have reaffirmed the validity of the PTD over time, including the seminal case of *Illinois Cent. R. Co. v. Illinois* (1892), which acknowledged states' rights and responsibilities with respect to their jurisdictional waters and held that no state can divest its duties under the PTD.¹²⁴

Today, the 1900-year-old concept of sovereign ownership of tidelands subject to a public trust is still among the most important and far-reaching doctrines in American property law, for two reasons. First, by virtue of holding public property rights out to the 3-mile limit of the U.S. territorial sea, each coastal state has far greater latitude in protecting societal interests than is generally the case on land, where most property is owned privately and government regulation must operate within the constitutional limits of the so-called "police power." Second, American courts for more than three centuries have reiterated that the trust, as the word implies, is so solemn an obligation of government that it cannot be extinguished, even though title to the lands in question might be conveyed to private parties in certain circumstances.¹²⁵

ii. *Coastal Zone Management Act*

After a California oil spill in 1969, Congress passed a series of federal environmental laws, including NEPA and the CZMA. The CZMA¹²⁶ established that "[t]here is a national interest in the effective management, beneficial use, protection, and development of the coastal zone."¹²⁷ It attempts to balance the competing needs and uses of resources within the coastal zone.¹²⁸ The CZMA also encourages states to use their management planning such that "priority consideration [should be] given to coastal-dependent uses and orderly processes for siting major facilities related to national defense, energy, fisheries development, recreation, [and] ports and transportation," among other things.¹²⁹

A key element of the CZMA and its implementation is the

¹²⁴ *Id.*; *Illinois Cent. R. Co. v. Illinois*, 146 U.S. 387 (1892).

¹²⁵ Dennis Ducsik, Mass. Office of Coastal Zone Mgmt., *The Public Trust Doctrine in Massachusetts Coastal Law* (2008), available at www.mass.gov/czm/coastlines/2008/ebbflow/trust.htm.

¹²⁶ 16 U.S.C.A. § 1451 et seq. (Westlaw 2011).

¹²⁷ 16 U.S.C.A. § 1451(a) (Westlaw 2011).

¹²⁸ 16 U.S.C.A. § 1452(1), (2) (Westlaw 2011).

¹²⁹ 16 U.S.C.A. § 1452(2)(D) (Westlaw 2011).

establishment of “enforceable program policies” by participating states. States’ coastal program policies are “enforceable” because they derive authority from existing state statutes and regulations. With a CZM-approved Coastal Management Plan (CMP), states may consider in-state impacts of federal activities in federal waters and determine whether these activities are consistent with the states’ CMPs through CZM’s consistency review provisions.¹³⁰

The CZMA requires that federal agency activities be consistent with state CMPs. However, the degree to which individual proponents of a project must comply with state coastal policies varies. For example, while the federal government must comply “to the maximum extent practicable,”¹³¹ a private party bears a heavier burden. A federal government agency must prepare a “consistency determination” to demonstrate to a state that it complies with the coastal policy.¹³² However, private applicants for federal license or permit activities,¹³³ applicants for OCSLA Plans,¹³⁴ and applicants for federal financial assistance activities¹³⁵ must *certify* to the affected states that the proposed activities are consistent with the enforceable policies of the state CMP.¹³⁶

At least as to private parties, the CZMA has teeth.¹³⁷ If CZM does not concur with a party’s “consistency certification,” the project cannot obtain permits or licenses from any federal agency.¹³⁸ There are timelines after which applications are presumptively approved,¹³⁹ and the statute contains provisions for appealing to the Secretary of Commerce to override disapproval by a state on the basis that the proposed activity “is consistent with the objectives of [the CZMA] or is otherwise necessary in the interest of national security.”¹⁴⁰ Nevertheless, the CZM

¹³⁰ 16 U.S.C.A. § 1456 et seq. (Westlaw 2011).

¹³¹ 16 U.S.C.A. § 1456(c)(1)(C) (Westlaw 2011).

¹³² *Id.*

¹³³ 16 U.S.C.A. § 1456(c)(3)(A) (Westlaw 2011).

¹³⁴ 16 U.S.C.A. § 1456(c)(3)(B) (Westlaw 2011).

¹³⁵ 16 U.S.C.A. § 1456(d) (Westlaw 2011).

¹³⁶ 16 U.S.C.A. § 1456(c)(3) (Westlaw 2011).

¹³⁷ As of March 2010, there were 141 state appeals of consistency review determinations. Of those, thirty-two were dismissed or overridden by the Secretary of Commerce on procedural grounds, and forty-four were heard. Of the appeals that were heard, the Secretary of Commerce decided to override the state objections in only fourteen cases. *See Appeals to the Secretary of Commerce Under the Coastal Zone Management Act (CZMA) (Mar. 10, 2010)*, available at coastalmanagement.noaa.gov/consistency/media/appealslist.pdf.

¹³⁸ 16 U.S.C.A. § 1456(c)(3)(A) (Westlaw 2011).

¹³⁹ 16 U.S.C.A. § 1456(c)(3)(A), (B)(ii) (Westlaw 2011).

¹⁴⁰ 16 U.S.C.A. § 1456(c)(3)(A), (B)(iii) (Westlaw 2011).

consistency review offers significant potential for states wanting to exert greater control over activities in federal waters that may have impacts on in-state coastal resources.

Although it had been clearly established in *Ten Taxpayers* that the federal government has exclusive permitting authority over Cape Wind's wind farm since it would be located in federal waters, Cape Wind still had to obtain approval for the undersea transmission cables that are necessary to bring the wind energy to the power grid on land.¹⁴¹ As noted previously, the Cape Cod Commission had denied approval of the cables, and Cape Wind applied to the Massachusetts Energy Facilities Siting Board (EFSB)¹⁴² for a certificate of environmental impact and public interest to override the Cape Cod Commission's denial.

The Alliance to Protect Nantucket Sound intervened in the EFSB proceeding. It had no serious objection to the cables, which in all material respects would be identical to several other electric cables that already run from the mainland of Cape Cod to Nantucket and Martha's Vineyard. The Alliance objected to the turbines in federal waters. Having lost the *Ten Taxpayer* litigation, the Alliance did not claim that the Siting Board had jurisdiction *per se* over the turbines. Instead, the Alliance made a subtle and nuanced argument designed to overcome *Ten Taxpayers* using a different strategy. This time, the Alliance claimed that while the Siting Board's jurisdiction was limited to the cable, the Board could, and indeed must, consider the *impacts* of the wind farm on Massachusetts waters. In the Alliance's view, the Board could refuse to permit *the cable* if it concluded that the wind farm itself would cause unacceptable impacts. To bolster this approach, the Alliance filed a motion to expand the scope of the EFSB proceedings to include consideration of the wind farm (or at least the impacts of the wind farm within Massachusetts waters).¹⁴³

Cape Wind and the Conservation Law Foundation, a nonprofit environmental group that supports the project, filed motions to exclude evidence of impacts from the wind farm and confirm that the Siting Board's jurisdiction was over the cable only.¹⁴⁴ Abiding by the state's

¹⁴¹ Alliance to Protect Nantucket Sound, Inc. v. Energy Facilities Siting Bd., 932 N.E.2d 787, 791-92 (Mass. 2010).

¹⁴² EFSB's mandate is "to provide a reliable energy supply for the commonwealth with a minimum impact on the environment at the lowest possible cost." MASS. GEN. LAWS ANN. ch. 164, § 69H (Westlaw 2011).

¹⁴³ Mass. Energy Facilities Siting Bd., EFSB 07-8, Ruling on Motions Re EFSB Jurisdiction Relative to DRI Decisions and on Motions Re Scope of Proceeding 7 (July 28, 2008), available at www.capecodtoday.com/downloads/jurisdiction_0728.pdf.

¹⁴⁴ *Id.* at 7-8.

prior decisions during the environmental review, the Siting Board confirmed that its jurisdiction was limited to the cables and that it did not have the authority to review the wind farm.¹⁴⁵ Thus, the Siting Board refused to admit expert testimony from the Alliance on the impacts of the wind farm,¹⁴⁶ and ultimately issued a certificate for the cable. The Alliance appealed to a single justice of the Massachusetts Supreme Judicial Court, and the case was reported to the full bench for disposition.

On appeal, the Alliance challenged the EFSB's decision to issue its omnibus "certificate" on a variety of grounds. The most potent objection was its claim that the Siting Board had abdicated its public trust responsibilities by refusing to consider in-state impacts of the wind farm.¹⁴⁷

The Alliance decried what it saw as a false segmenting of the project into discrete components (e.g., the federal component including the turbines, and the state component as limited to the transmission lines.), challenging EFSB's "'semantic fiction' of a stand-alone 'transmission project.'"¹⁴⁸ They attempted to distinguish *Ten Taxpayers*, arguing that the case did not address a state's authority to consider in-state impacts of the project in federal waters.¹⁴⁹

In a 5-2 decision, the court rejected the Alliance's challenge. The court held that the Siting Board's governing statute limited its review to the project for which the proponent sought a license, in this case, the electric cables. The court also reasoned that if the Board did what the Alliance requested—review the impacts of the wind farm and deny or condition the electric cable on that basis—it would in effect be asserting jurisdiction over the cable, in violation of *Ten Taxpayers*. In other words, the Board would do indirectly (deny the cable a permit and thereby kill the project) what it could not do directly (assert jurisdiction over the wind farm).¹⁵⁰ The court also relied heavily on the fact that the project "has undergone extensive scrutiny by Federal and State agencies."¹⁵¹ The

¹⁴⁵ *Id.* at 9-10.

¹⁴⁶ Mass. Energy Facilities Siting Bd., EFSB 07-8, Final Decision on the Matter of the Petition of Cape Wind Associates, LLC for a Certificate of Environmental Impact and Public Interest 7-8 (May 27, 2009), available at www.env.state.ma.us/dpu/docs/siting/efsb07-8/52709cwford.pdf.

¹⁴⁷ Brief of the Towns of Aquinnah, Chilmark and Edgartown as Amicus [sic] Curiae at 10, *Alliance to Protect Nantucket Sound, Inc. v. Energy Facilities Siting Bd.*, 932 N.E.2d 787 (Mass. 2010) (No. SJC 01596).

¹⁴⁸ *Id.* at 18, 20.

¹⁴⁹ *Id.* at 24, 25.

¹⁵⁰ *Alliance*, 932 N.E.2d at 804-05.

¹⁵¹ *Id.* at 805.

court specifically acknowledged that Cape Wind had been subjected to NEPA review, and that the CZM certified that the entire Cape Wind project will be consistent with Massachusetts' CMP.¹⁵² The CZM certification was particularly relevant, because CZM, a state agency, performed precisely the review that the Alliance claimed was needed—to examine the in-state impacts of the wind farm to ensure that the wind farm was consistent with the state's protective laws.

In a searing dissent, then-Chief Justice Marshall expressed her disagreement with the court's ruling regarding public trust matters, noting that a "wind farm today may be a drilling rig or nuclear power plant tomorrow."¹⁵³ She expressed concern about the broader precedent of undermining the state's public trust obligations and argued that a more thorough consideration of in-state impacts would not necessarily be preempted by federal law ("Comity within our Federal system has more meaning than the court's crabbed approach").¹⁵⁴ Finally, overlooking the crucial role that CZM played in assessing the impact of the wind turbines on state waters, Justice Marshall contended that the court's decision casts the public trust doctrine and government energy policy in opposition and "exalts regulatory expediency at the cost of fiduciary obligation."¹⁵⁵

While the jurisdictional issue was a close call, as reflected by the divided court, the majority had the better argument when one considers the overriding federal interest in developing offshore wind energy. It serves public policy goals for wind facilities to be located as far offshore as possible to avoid interfering with near-shore uses of water bodies and arousing public opposition. This means locating wind facilities in federal waters, more than three miles from shore. Every such facility will require a cable through state waters to transmit the electricity. Were Justice Marshall's opinion accepted by the majority, every state could use its permitting authority over the electric cable as an indirect means of blocking a wind farm in federal waters. This would be akin to giving each state a veto over its respective segment of a national highway or an interstate gas pipeline. The result would inevitably thwart the national goal of developing offshore wind as an alternative energy source. In contrast, the majority opinion does not hand the state an indirect veto over wind farms in federal waters. However, states still have a significant say, both as participants in the federal environmental review process and

¹⁵² *Id.*

¹⁵³ *Id.* at 816 (Marshall, C.J., dissenting).

¹⁵⁴ *Id.* at 823-24.

¹⁵⁵ *Id.* at 824.

through their coastal zone management authorities. Those authorities can deny a consistency certification, subject to the authority of the Secretary of Commerce to overturn such decisions when significant national interests are implicated.

IV. CONCLUSION

As of the date of this writing, Cape Wind's prospects look favorable. All of the federal and state permits have been acquired, though the former are currently on appeal. Cape Wind has signed a contract to sell half of its output to a Massachusetts utility company and is actively seeking buyers for the other half of the electricity. Thus, notwithstanding all of the legislative obstacles, permitting delays, and litigation, Cape Wind is moving closer to construction. However, its apparent success is in spite of, not because of, our laws and regulatory processes. The Cape Wind experience, while helpful in resolving certain issues (such as the allocation of jurisdiction between state and federal authorities), clearly illustrates the need for significant reform if we are to have a robust offshore wind energy industry.

Panther politics: neoliberalizing nature in Southwest Florida

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Abstract. The past quarter century has witnessed a ‘quieter revolution’ in land-use management in the United States, from top-down regulation and adversarial environmentalism to multistakeholder collaboration and voluntary market-based mechanisms designed to forge a compromise between nature protection, property rights, and local livelihoods. The latter approach has become hegemonic, and yet this dramatic shift has received little attention from political ecologists. In this paper I argue that two contradictory lessons on the topic can be drawn from political ecology. On the one hand, proponents of the ‘quieter revolution’ invoke themes and normative stances shared by political ecologists, celebrating self-management by place-based communities drawing on local knowledge, in opposition to control by central governments and powerful environmental groups wielding ‘big science’. On the other hand, the ‘quieter revolution’ exemplifies the neoliberalization of nature, which political ecologists have critiqued as providing a ‘stamp of environmental approval’ for capitalist expansion, often at the expense of the nature values it claims to defend. Thus, the ‘quieter revolution’ exposes tensions in the application of the Third-World-based political ecology orientation to a First World setting. I explore these tensions through a case study of voluntary and collaborative approaches (specifically, transfer of development rights and habitat conservation planning) in exurban Collier County in southwest Florida. I argue that in this context, it is more useful to focus on the neoliberalization of nature than on the valorization of local knowledge and control, because the discourse of local knowledge and livelihoods aligns with the (anti-environmental) interests of locally powerful actors. These power relations—and the limits of deeply embedded assumptions that undergird the political ecology literature—are revealed most effectively through ethnographic examination of the micropolitics of particular cases.

Keywords: conservation, neoliberalization, collaborative environmental management, market-based environmentalism, transfer of development rights, habitat conservation plan, Florida panther

Exurban sprawl is a leading cause of biodiversity loss in the United States due to habitat destruction, fragmentation, and degradation (Johnson and Klemens, 2005). The traditional regulatory tools for combatting sprawl are local zoning and federal permitting, particularly under the Endangered Species Act (ESA) and the wetlands provisions of the Clean Water Act. But zoning is often ineffective and always impermanent (Pruetz, 2003, page 3). The ESA was not designed to protect habitat and is thus a blunt instrument for land-use control (Goble et al, 2006), while the Clean Water Act is notorious for failing to protect wetlands (Pittman and Waite, 2009). Regulations often meet fierce resistance on property-rights grounds, particularly in the wake of the 1990s ‘takings’ movement that cast all uncompensated regulation of private land use as unconstitutional (Yandle, 1995). Environmental groups can litigate to compel stronger implementation of regulations, but this adversarial approach is costly and often fruitless. By some accounts, “the degree of regulatory control necessary to

permanently conserve private property from development is not and never will be politically or legally possible” (Wright and Czerniak, 2000, page 420).

Over the past quarter century or so the perceived failures of regulation have sparked a dramatic transformation of land-use policies in the United States. If the proliferation of regulations in the 1970s constituted a “quiet revolution in land use control” (Bosselman and Callies, 1971), then the 1990s ushered in a “quieter revolution” that was more “fitting for an era of diminished government” (Mason, 2008, page 2). The reliance on top-down regulation and adversarial environmentalism gave way to multistakeholder collaboration and voluntary market-based mechanisms, designed to forge a compromise between nature protection, property rights, and local livelihoods (Brick et al, 2001; Koontz et al, 2004; Sabel et al, 2000; Wilcove et al, 1996; Wondolleck and Yaffee, 2000). This shift has been called “the most significant and exciting development in resources management since the environmental movement of the 1960s and 1970s” (Kenney, 2001, page 188).

The relative merits of voluntary and collaborative versus regulatory and adversarial approaches have been widely debated by scholars and practitioners, with a large majority favoring the former. Yet despite the topic’s salience, it has received little attention from political ecologists.⁽¹⁾ What does the ‘quieter revolution’ look like from the vantage point of political ecology? On the one hand, its proponents invoke several themes that are central to much work in political ecology. They celebrate self-management by place-based communities rooted in “rural economies dependent on nature’s bounty” and drawing on local knowledge (Weber, 2000, page 247), against control by governments and environmental organizations wielding “big science” (Burchfield, 2001, page 242). They “consider the separation of humans from nature an impossible task”, and defend local livelihoods against exclusionary constructions of nature (Weber, 2000, page 243). Much like the community-based approaches championed by political ecologists in the Third World, they recast local people as conservation allies rather than villains and seek “to meet ecological and human needs simultaneously” (Brick and Weber, 2001, page 16). This is all consistent with the normative stance of political ecologists, whose research “typically proceeds from an implicit sympathy with local and historically grounded claims on the productive use of resources . . . , and from a corollary skepticism towards the state and [environmental] organizations involved in local resource conflicts” (McCarthy, 2002, page 1298).

But on the other hand, the quieter revolution also exemplifies the neoliberalization of nature, wherein “[s]tate functions aimed at curbing socially and environmentally destructive effects of capitalist production are ‘rolled’ back . . . and ‘restructured’ in a variety of ways”, including “shifts from binding to increasingly voluntarist, neo-corporatist regulatory frameworks” (McCarthy and Prudham, 2004, page 276; see also McCarthy, 2005). Political ecologists are almost uniformly skeptical about neoliberalization, warning that it provides a “stamp of environmental approval” for capitalist expansion, often at the expense of the nature values it claims to defend (Corson, 2011, page 127; see also Brockington and Duffy, 2011). This strand of political ecology resonates with the skeptical minority of ‘quieter revolution’ analysts, who warn that collaborative processes tend to be dominated by locally powerful interests and can facilitate “the institutionalization of a dangerous level of compromise and capitulation” (Nie, 2003, page 163; see also Coggins, 2001; Farber, 2000; Layzer, 2008; McCloskey, 1996; Savitz, 2000).

Thus, as in the case of the Wise Use movement studied by McCarthy (2002), the ‘quieter revolution’ exposes tensions in the application of the Third-World-based political ecology

⁽¹⁾Works that consider ‘quieter revolution’ policies from the perspective of neoliberalization, thus constituting exceptions to this rule, include: Logan and Wekerle (2008), McCarthy (2005), Morris (2008), and Sandberg and Wekerle (2010).

orientation to a First World setting. Here I explore these tensions through a case study of voluntary and collaborative approaches in the rural hinterland of Collier County in southwest Florida. The study draws on qualitative research conducted in 2010–12, including nineteen open-ended interviews with thirteen key actors (environmental advocates, landowners, county staff, and consultants) and review of primary documents and news coverage. Several individuals were interviewed two or three times over the course of three years, and interviews lasted from one to two hours. This kind of fine-grained research is needed to explore the “contradictions of specific neoliberalizations of specific aspects of the biophysical world” (Castree, 2008, page 137).

On Collier’s exurban fringe during the real-estate boom of the late 1990s, development pressures began to encroach upon areas with high nature values, including the last remaining habitat for the endangered Florida panther. In 1999 the state of Florida ruled that county officials were failing to adequately regulate exurban development and directed them to produce a new growth-management program through a collaborative process. The result was a complex transfer-of-development-rights (TDR) program covering nearly 200 000 acres of private lands that encourages landowners to preserve high-nature-value areas by awarding them increased development densities elsewhere. Negotiations between landowners and environmentalists over the TDR program evolved into a deeper collaboration aimed at improving protection of panther habitat within the program territory. This process culminated in an application submitted by the landowners for a Habitat Conservation Plan (HCP). An HCP is a provision of the ESA that authorizes collaborative and incentive-based planning for conservation on private lands, by exempting landowners from the law’s strict prohibition on harming listed species in exchange for mitigation of habitat loss.

Should these developments in eastern Collier be celebrated as a ‘win–win’ balancing of nature protection with local livelihoods and property rights, or critiqued for opening up new spaces for capitalist expansion? This question is not merely academic, but is hotly contested within the local environmental community. Two of the three major environmental groups in the county endorse the TDR program and proposed HCP, while the third contends that these encourage a checkerboard pattern of urbanization in a remote area where development would not otherwise have been commercially viable. The conflict now hinges on competing narratives of what constitutes panther habitat, with the critical environmentalists invoking ‘best available science’ to rein in development and the supportive groups upholding the ‘local knowledge’ claims of landowners against the former.

Political ecology invites skepticism about this deployment of science, because such narratives have often been found guilty of ‘misreading the landscape’, particularly when they conflict with local knowledge in ways that benefit powerful government and environmental actors (Fairhead and Leach, 1996; Stott and Sullivan, 2000). But the political ecology critique is grounded in colonial and postcolonial Third World settings. Can it be transposed into the political–economic context of the First World, where entirely different power dynamics are at play? Some analysts of collaborative management have, implicitly, done so, defending ‘local knowledge’ against the privileging of science in terms very similar to those of political ecology. Moreover, collaborative management in the US was in some instances modeled directly on similar approaches in the Third World (McCarthy, 2005, page 1003). I contend, however, that the Collier case demonstrates the need to be more careful with such transposition. Here, the ‘local’ actors are very large, mostly corporate, property owners; the ‘local livelihoods’ at stake are primarily intensive real-estate development; the narrative of ‘big science’ has been politically marginalized, relative to the narrative backed by ‘local knowledge’; and the scientific narrative is potentially the most effective tool for defending nature values against capitalist expansion. In short, the Collier case suggests that a political

ecology of the ‘quieter revolution’ should attend closely to the dynamics of neoliberalization and avoid uncritically valorizing the local. The Collier story thus demonstrates the need for more ethnographic research that attends to the micropolitics of particular cases.

(Mis)managing growth in southwest Florida

The Florida panther (*Puma concolor coryi*) is one of the world’s most endangered large mammals. Its historic range stretched across eight southeastern states; now the sole remaining breeding population—estimated at fewer than 120 individuals (McBride et al, 2008)—inhabits less than 5% of this territory, in the interior of south Florida (Kautz et al, 2006). The panther was listed by the US Department of Interior as endangered in 1967; today, this solitary, territorial, and wide-ranging cat continues to confront the primary threat to its existence: habitat loss and fragmentation. Public lands account for 73% of the panther’s known range, but private lands are interspersed throughout (Kautz et al, 2006); thus their management is vital to the survival and recovery of the iconic cat. These lands have been subjected to increasing development pressure in recent years, which regulatory oversight has largely failed to counteract.

Florida’s population almost tripled between 1960 and 1995, and before the most recent economic crash it was projected to double again by 2060, resulting in conversion of “seven million acres of undeveloped land into urban land uses” (Zwick and Carr, 2006, page 7). Because southeast Florida—the ‘Gold Coast’ stretching from Miami to West Palm Beach—is already largely built out, the southwest region would bear the brunt of this transformation. Indeed, the region was an epicenter of the most recent nationwide real-estate bubble. The National Association of Home Builders ranked Naples, the Collier County seat, “the hottest housing market in the country” in 1997, 1998, and 1999 (Edwards and Staats, 1999). This explosive growth was particularly alarming to conservationists because of the county’s geography. Some 80% of the county’s roughly 300 000 permanent residents live in an urbanized strip along the Gulf of Mexico, bounded to the east by County Road 951 (figure 1). The urban area accounts for only around 6% of the county’s territory, while the interior features 700 000 acres of public conservation lands, including Big Cypress National Preserve, the Florida Panther National Wildlife Refuge, and a portion of Everglades National Park. Sometimes called the ‘forgotten Everglades’, the area has some of the largest expanses of wetlands remaining in Florida and sustains a wealth of biodiversity. Bordering these public lands are roughly 200 000 acres of privately owned farms and ranches, which contain important flowways and wildlife corridors. Most of this land is owned by a handful of very large corporate landowners, who are powerful players in local politics.

With coastal Collier largely built out in the late 1990s, the real-estate frenzy began to spread into the rural interior. The Collier County Commission—an enthusiastic participant in the county’s ‘urban growth machine’ (Logan and Molotch, 1987)—began floating proposals for altering the county’s growth-management plan to permit development east of the urban boundary. Public opposition to these moves was spearheaded by the three most prominent environmental groups in the county: two affiliates of major national organizations—the Collier County Audubon Society and the southwest field office of the Florida Wildlife Federation (FWF, an affiliate of the National Wildlife Federation)—and a large regional organization, the Conservancy of Southwest Florida. In summer 1997 FWF and Collier Audubon sued the commission for approving a new golf-course community on the wrong side of the urban boundary. The county’s maneuverings also attracted the attention of state authorities, who held hearings on the proposed growth-plan amendments. In June 1999 the state cabinet imposed a growth moratorium in eastern Collier pending completion of a “collaborative, community-based” study, conducted “with full and broad-based public participation”, to design a new

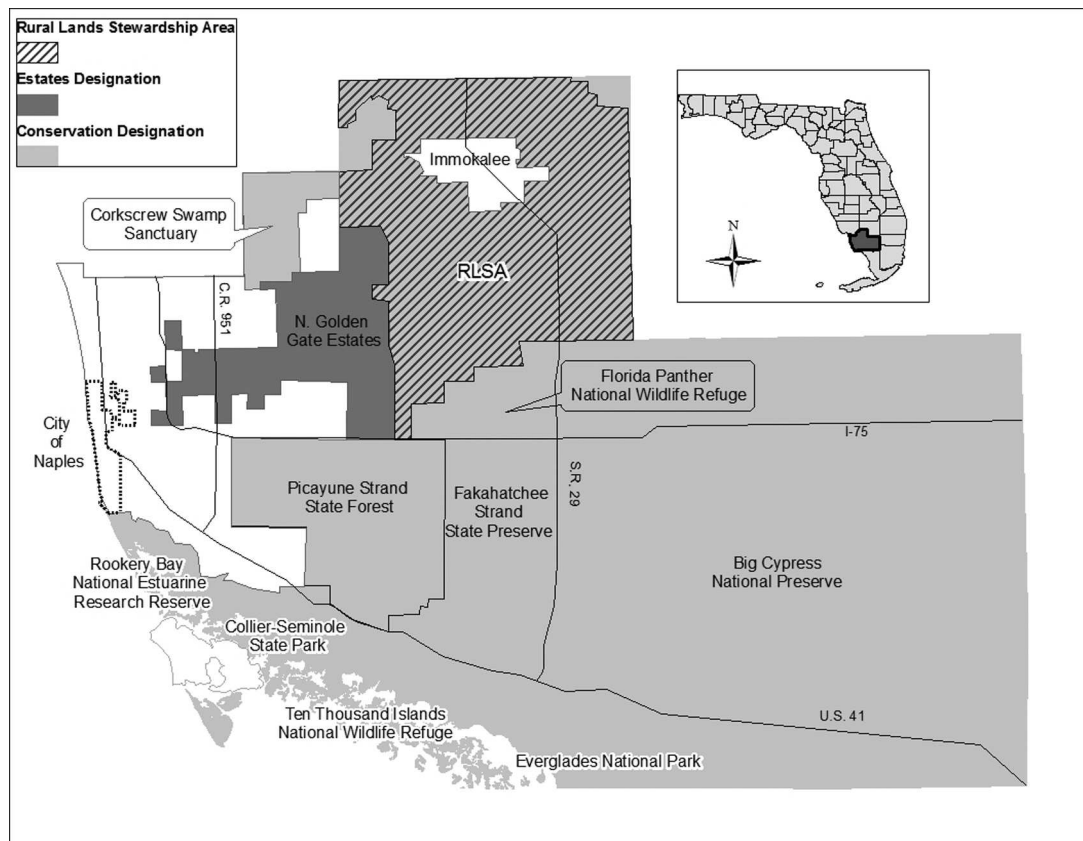


Figure 1. Map of Collier County (map by Michael Falkner).

growth plan that would employ “innovative approaches” to combat sprawl and protect wetlands and habitat (Final Order No. AC-99-002, DOAH Case no. 98-0324GM).

The county commission essentially turned over the ‘community-based’ study to the largest eastern Collier landowners. Conducted by development consulting firm WilsonMiller, the study was paid for by Eastern Collier Property Owners (ECPO), a newly formed association of landowners who collectively owned 168 000 acres of the roughly 200 000-acre study area. ECPO comprises one family-owned ranch and five large agribusiness corporations: Barron Collier Cos., Collier Enterprises, Alico Corporation, Consolidated Citrus (owned by King Ranch), and Pacific Tomato Growers. The county barred representatives of FWF and Collier Audubon from a citizens’ committee overseeing the study, which critics claimed was “stacked with agri-business and landowner-friendly interests” (Zoldan, 2002b). FWF representative Nancy Payton denounced the process as “a cabal of landowners, land barons, plotting the future of Collier County behind closed doors” (Staats, 2000).

The ‘quieter revolution’ comes to Collier County

The planners devised a highly complex TDR program called the Rural Land Stewardship Area (RLSA), covering 195 000 acres—mostly citrus orchards, vegetable farms, and cattle pastures—of which 182 000 acres are privately owned. TDR is designed to “encourage the voluntary shift of development from places that communities want to save, called sending areas, to places that communities want to grow, called receiving areas” (Pruetz, 2003, page 3). Landowners in sending areas can voluntarily restrict development of their property by placing it under easement, in exchange for development credits that they can sell to landowners in

receiving areas, who in turn can use the credits to develop at a density higher than permitted under existing 'baseline zoning'.

WilsonMiller identified roughly 89 000 acres of sending areas for water retention and protection of wetlands and listed species' habitat. Potential receiving areas were not delineated in advance and can be located anywhere in the designated 'open areas'—that is, in the remaining 92 800 acres with lower environmental values (WilsonMiller, 2002; see figure 2). The number of credits assigned to land parcels varies on the basis of habitat values,

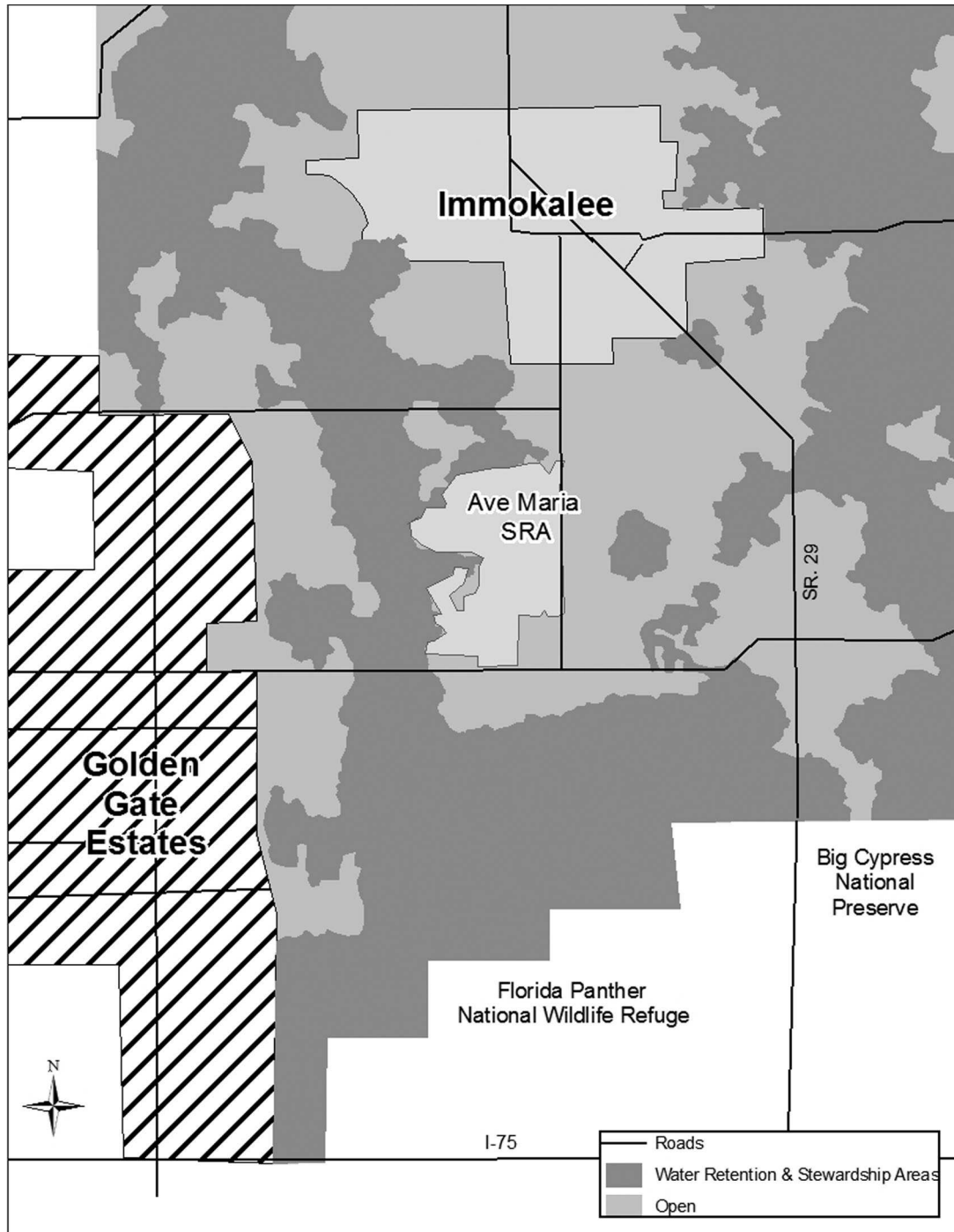


Figure 2. Map of Rural Land Stewardship Area (map by Michael Falkner).

land-use/landcover type, restoration potential, and other factors. Owners of sending areas are not required to relinquish all land-use rights to activate their credits; rather, up to seven ‘layers’ can be removed in order from highest intensity (residential development) to lowest (pasture, forestry, hunting cabins). Based on WilsonMiller’s initial calculations in 2002, there were enough sending area credits in the program to permit a total of 16 800 acres of development at build-out (ie, when all the credits have been sold or transferred); five years later, the consultants increased that estimate to 36 000 acres (Collier County, 2009). Participation in the RLSA is voluntary; nonparticipating landowners may develop their property in accord with the baseline zoning of one residential unit per five acres. The first application for a receiving area was submitted by Barron Collier Cos. to build the university and town of Ave Maria on 5000 acres of tomato fields, twenty-five miles inland from Naples and just north of the Florida Panther National Wildlife Refuge; the project broke ground in 2006. Plans for a second town, called Big Cypress, on 3600 acres owned by Collier Enterprises were submitted in 2006 but put on hold when the real-estate bubble collapsed in 2008.

From the outset, environmental groups voiced concerns that the RLSA did not adequately protect habitat and that it could potentially allow nearly twice as many new dwellings as the county’s existing growth plan (Zoldan, 2002a; 2002b). After the plan’s unveiling, however, FWF and Collier Audubon entered into extended negotiations with WilsonMiller and ultimately agreed to endorse the RLSA in exchange for concessions including wildlife crossings, an additional 5000 acres of sending areas, wetland buffer zones, and incentives for ecological restoration activities. Several months later the Conservancy also signed on (Staats, 2002a).

In February 2007 the Defenders of Wildlife, a national organization with state headquarters in St. Petersburg, announced its intent to sue the US Fish and Wildlife Service (USFWS) and the US Army Corps of Engineers for failing to require sufficient mitigation for impacts on panther habitat when they issued wetland destruction permits for the town of Ave Maria (Cox, 2007). The chief executive officer of Barron Collier Cos. called Defenders to propose bringing landowners and environmentalists together to discuss panther management. This conversation led to a year-long series of informal meetings, beginning in April 2007, involving ECPO and five environmental groups: Defenders, FWF, Collier Audubon, Audubon of Florida, and the Conservancy. In June 2008 the group—minus the Conservancy—unveiled the “Florida Panther Protection Program” (FPPP), a voluntary plan to modify the RLSA by increasing habitat mitigation ratios; issuing new stewardship credits to incentivize agricultural preservation; and establishing a fund, financed by a new development fee, to pay for restoration projects, wildlife crossings, land acquisition, and the like.

The voluntary FPPP laid the groundwork for an HCP application submitted to USFWS by ECPO in June 2010. HCPs provide exemptions from the ESA—which strictly prohibits harming listed species—by allowing ‘incidental take’ in the course of lawful activities, in exchange for mitigation of those impacts. The ECPO application requests a fifty-year ‘incidental take permit’ within a territory largely coterminous with the RLSA, covering multiple species⁽²⁾ but focusing on the panther as a wide-ranging ‘umbrella species’. To compensate for habitat destruction, the plan proposes mitigation at a level 25% beyond that required by USFWS regulations, plus the measures laid out in the FPPP (ECPO, 2010).

Like the RLSA upon which it builds, the HCP is a textbook case of the ‘quieter revolution’ at work, touted by supporters as a pragmatic, incentive-based alternative to command-and-control regulation, which is widely seen as having failed to protect panther habitat. The Collier case can also be seen as resonating with the normative concerns of political ecology. One analyst of collaborative management in the US implicitly makes this connection:

⁽²⁾The Florida scrub jay, northern crested caracara, wood stork, red-cockaded woodpecker, Everglade snail kite, American alligator, Eastern indigo snake, gopher tortoise, and Florida bonneted bat.

“In international conservation efforts, the need to work with local communities and indigenous peoples is axiomatic. But in this country, the environmental movement often ignores this wisdom, preferring instead the hammer of national environmental legislation to accomplish its goals” (Brick, 2001, page 175). As one ECPO member, the third-generation owner of a family-run ranch, complained to me:

“I’ve been in meetings [with government and environmental groups] and a map will be thrown up and my property is on there, and they’ll be talking about things that they want to do on *my* property, or plans that they have in the works for *my* property, that I don’t even know about That’s *our home*, that’s where *we live*. But people are out there making plans about it and they want to preserve it—well, this isn’t the Everglades National Park. You’re talking about where somebody is living and making a living” (interview, 28 July 2010).

In the RLSA and HCP processes, in contrast, local landowners were empowered to devise their own plan for managing natural resources on their lands.

As with community-based programs in the Global South, the collaborative process in Collier is seen as having transformed local landowners into conservation allies by linking their livelihoods to nature protection. And much as political ecology scholarship often defends the land-use practices of local residents against critiques by government and environmentalists, eastern Collier’s landowners identify themselves as good stewards of nature. As the ranch owner put it:

“Nobody wants our property to be good habitat more than we do. We have more panthers on our property than probably any other private property in the state So we already look at ourselves as good stewards and we do understand more than they did back when everything was being diked up and canals dug and all that sort of thing And I think that’s a common feeling among the landowners.”

Tom Jones, an executive for Barron Collier Cos., similarly contends that the county’s large landowners:

“know an awful lot about resource management. I’ve told people that there are panthers in eastern Collier County . . . because of our actions, not in spite of our actions. If we didn’t maintain this land in the state that it was, there wouldn’t be any panthers out there. We haven’t plowed everything fence-line to fence-line We don’t hunt deer to extinction I think we do an incredibly better job than what the federal government does in managing their lands” (interview, 2 July 2010).

Neoliberalizing nature: the devil in the details

While FWF and Collier Audubon have maintained enthusiastic support for the RLSA to this day, the Conservancy has become increasingly skeptical, and their concerns are shared by the Department of Community Affairs (DCA), the state’s growth-management agency. In a review of the program released in December 2007, DCA noted the program’s “extreme complexity” (DCA, 2007, page 6). The RLSA is, as a county planner described it to me, a “TDR on steroids,” with multiple categories of sending areas and credit types, multiple land-use layers, and multivariate indices for calculating natural values (interview, 2 June 2002). According to the DCA chief, “numerous people . . . consider the Collier methodology to be ‘Byzantine,’ ‘incomprehensible,’ ‘voodoo planning,’ . . . and ‘lacking in transparency’” (letter to Collier County manager, 8 May 2008). This complexity makes it hard to predict the program’s impacts. Nicole Ryan, the Conservancy’s government relations director, told me that when the credit system for the RLSA was initially proposed, in 2002, Wilson Miller indicated that the credits available would equate to approximately 16 800 acres of development, assuming 100% participation in the program. But by 2007 the figure had increased to 36 000 acres. According to Ryan,

“this discrepancy between how much development we thought could occur and what was actually included in the program as adopted was likely due to the complexity of the credit system I think [WilsonMiller] are the only ones that really understood how the plan worked [at the time of adoption]” (interview, 1 July 2010).

This predictive challenge is compounded by the program’s flexibility. The locations of neither sending nor receiving areas were specified in advance; rather, they can be sited anywhere within areas designated as environmentally valuable or ‘open’, respectively, which “can result in a patchwork quilt pattern of protected and unprotected areas” (DCA, 2007, page 6). And unlike a traditional TDR program, the RLSA does not require owners of sending areas to forego all development of their lands; rather, they choose how many of the seven land-use layers to remove. In practice, Ryan said, most of the land is kept as row crops or pasture (interview, 1 July 2010).

While the uncertainty makes it difficult to precisely calculate the RLSA’s potential footprint, it is undeniably substantial. Development under the baseline zoning of one unit in five acres would have allowed a maximum of 36 500 dwelling units, housing some 87 000 people, at build-out. But the RLSA, based on the 36 000-acre footprint, yielded population estimates ranging from 200 000 to 390 000 (DCA, 2007, page 8). Subsequently the Florida Panther Protection Program proposed adding a new category of credits for preserving agricultural lands, which would increase the potential footprint to 45 000 acres, or almost triple the original estimate.

Critics were also concerned about the transportation impacts of development, particularly since the RLSA allows for not only ‘towns’ of 1000–4000 acres, such as Ave Maria, but also much smaller communities. “Other than the towns”, DCA cautioned, “it is unlikely that these developments would be sustainable communities in terms of providing an adequate balance of living, working, shopping, civic, recreation, and other uses” (page 8). Even Ave Maria, which was billed as “self-sustainable compact development” but where the closest public school was thirteen miles away, was problematic (Staats, 2002b). As Ryan put it, “Was that the best location for a brand-new town? Twenty miles from the interstate, where you have to six-lane a two-lane road?” (interview, 1 July 2010). New roads are especially troubling in this area because road-kill is a leading cause of panther mortality. These concerns were heightened in December 2008, when WilsonMiller released a “conceptual build-out roadway network” map identifying twenty-two communities that might eventually be permitted, and 87 miles of new roads to service them (Staats, 2008; see figure A1 in the online appendix: <http://dx.doi.org/10.1068/a45294>).

In short, given the total acreage, distribution, and traffic impacts of potential development, the critics concluded that the RLSA allowed for enough intensification to threaten the “overall rural character of the area”, thereby undermining the program’s intent (DCA, 2007, page 12). This concern was echoed by a team of panther biologists and landscape ecologists that reviewed the program in 2009 (Florida Panther Protection Program Technical Review Team, 2009, pages 29, 60). In response, RLSA supporters contend that the new towns would have much less environmental impact than the mostly likely alternative scenario without the RLSA: namely, low-intensity development under the baseline density of one unit per five acres. Exhibit A for this scenario is Northern Golden Gate Estates, a sprawling 1960s-era subdivision just west of the RLSA territory, where five-acre ‘ranchettes’ are scattered across a 75-square-mile grid of roads and drainage canals. Without the ability to upzone and cluster development, supporters argue, population growth would eventually produce another 300 square miles of Estates-style ranchettes. But the skeptics maintain that this scenario is extremely unlikely, because the infrastructure costs are too high and the demand too weak for this type of development. Indeed, fifty years after the first lots went on sale, the Estates

themselves are still only half built-out (Stackel, 2007). Thus, without the RLSA the likeliest development scenario would have been a sparse scattering of five-acre homes. According to a local newspaper columnist, development consultant, and chair of the county's citizen-based Planning Commission that reviewed the RLSA:

"The RLSA just isn't going to protect more of the environment than would have been left alone in the previous system I mean, how disruptive to a panther's roaming is a five-acre house once in a while? . . . [The RLSA] is not an environmental program It's a development encouragement program" (interview, 29 July 2010).

Moreover, unlike a traditional TDR program in which sending areas are categorically downzoned, participation in the RLSA is voluntary, and nonparticipating landowners may develop their property at the baseline density of one in five. Thus the program does not, in fact, preclude Estates-style ranchette development. According to Jennifer Hecker, the Conservancy's natural resource policy director, the creation of new towns could actually *increase* the likelihood of ranchette development in the area, given that some 14 000 acres are owned by smaller, non-ECPO landowners:

"The big problem is that the program is entirely voluntary and only a couple of major landowners cut this deal, but there are smaller landowners in there whose land is included and they may not be on board. So if the big landowner builds a city and the little guy says 'no, I don't know how to use credits and I don't have enough land to build a city', then they can always revert to building ranchettes because it's still zoned for that, so the problem is you will likely have both in the end. You will have cities and then anywhere in between can become ranchettes, which will become more desirable because you have the services in the cities to support that kind of development" (interview, 22 June 2010).

Thus, rather than promoting compact development, the RLSA has the potential for "promulgating a low-density sprawl pattern surrounding the developed receiving areas" (DCA, 2007, page 8). Collier Audubon representative Brad Cornell concedes this point:

"that is a flaw in the current version of Rural Land Stewardship. When you build Ave Maria, all the nonparticipating lands are more vulnerable because now you've created basically a magnet I certainly will acknowledge that it is a compromise. Do we want all those towns out there? Ideally no. If we had our druthers, it would all be restored" (interview, 26 July 2010).

But it was a compromise worth making, he contends, because without the development permitted through the RLSA, there would be no incentives generated to place the most valuable natural areas under easement.

TDRs have been used in the United States since the late 1960s, but little is known about how effectively they protect natural processes. The literature on TDRs typically measures performance in terms of the amount of land placed under easement (Kaplowitz et al, 2008; Macheimer and Kaplowitz, 2002; Pruetz and Standridge, 2009). A 2009 study identified the Collier RLSA as one of the country's relatively rare 'success stories' in this regard (Pruetz and Standridge 2009); currently just over 60 000 acres are under easement (Collier County Commission, no date). However, preserved acreage is a policy *output*, not an *outcome*; it does not measure the actual environmental impacts of development (Koontz and Thomas, 2006). The literature largely ignores this distinction: out of some thirty articles published in social science journals since 1990, I found only four that address outcomes. These papers sound some cautionary notes: TDR may lead to more overall development than traditional zoning would, if parcels that were unlikely to be developed are granted credits (Levinson, 1997; McConnell et al, 2006); it does not always channel development in the desired directions (McConnell et al, 2005; 2006); and it does not necessarily prevent land fragmentation if unaccompanied by adjacency and contiguity criteria (Brabec and Smith, 2002). In short,

“the devil ... is in the details” of each program’s design (McConnell et al, 2005, page 131). According to the Conservancy, DCA, and other skeptics, a close reading of the RLSA’s complex fine print reveals that formally preserved land is not, in fact, meaningfully protected from the impacts of development.

From this perspective, the other environmental groups’ endorsement serves to legitimize a development-intensification program. Environmentalism “has become enrolled in the promotion of capitalist expansion”, at the expense of nature values (Corson, 2011, page 110). In this neoliberalizing context, it is not useful to frame ECPO as ‘local people’ defending ‘land-based livelihoods’, as per both the political ecology and the ‘quieter revolution’ paradigms. To be sure, the ECPO members are, largely, ‘local’: the operations of the two Collier companies and Alico are confined to southwest Florida, and Pacific Tomato Growers operates in three states but is headquartered in the region; only King Ranch has headquarters out of state. The collaborative endeavor was spearheaded by Barron Collier Cos., which, like Collier Enterprises, is a family business owned by the heirs of Barron G Collier, who began purchasing land in southwest Florida in 1911, not long after modern-day habitation began in the region. Moreover, at least one (much-cited) proponent of collaboration contends that corporations can, through the collaborative process, learn to practice an “inhabitory” citizenship that “demonstrate[s] a genuine and reliable responsiveness to the place” (Kemmis, 1990, page 134). Still, five of the six ECPO members are large and powerful corporations—a far cry from the marginalized smallholders and landless peasants with whom political ecology is typically concerned, or even the timber workers and small-scale ranchers often discussed in the collaboration literature. What is at stake in this conflict is not their current livelihoods: according to Tom Jones, agriculture in the region “will occupy a very similar position in the future that it does today.” Rather, it is their ability to increase profits by intensively developing agricultural land.

Science wars: contesting panther habitat

While the Conservancy participated in the negotiations for the FPPP, their concerns were not allayed, and they ultimately decided not to endorse it. They have been highly critical of ECPO’s HCP application, contending that it fails to correct the “fatal flaw” in the design of the RLSA: it does not keep development out of the most important panther habitat areas, as determined by science. The ESA requires USFWS to make use of “best available science” when evaluating a proposed HCP, yet controversy over what constitutes the “best available science” frequently plagues HCPs and other aspects of ESA implementation (Carolan, 2008; Doremus, 2003; Hood, 1998). Typically, “environmental groups tend to favor the science that provides the most conservative and restrictive approach to the habitat. Private landowners seek to find scientific solutions that permit development activities” (Troast et al, 2002, page 247). In the Collier case, however, panther science is contested within the environmental community itself.

The RLSA’s ‘fatal flaw’ came to light only after the program was launched. Previously, scientific consensus on the nature of panther habitat was based on the work of biologist David Maehr. Until his death in 2008, Maehr was “the face of panther science” (Pittman, 2010b). He led the state wildlife agency’s panther monitoring program from 1985 until 1994, and “authored or coauthored some 75% of the habitat-related research on the Florida panther” (Gross, 2005, page 1527). In a 1995 paper Maehr asserted that panthers are forest obligates that will not cross more than 90 m of unforested landscape; do not occupy forest patches smaller than 500 ha; and “avoid” unforested landcover types, including agricultural lands (Maehr and Cox, 1995). This became the “most influential paper on panther habitat use”, underpinning all subsequent scholarly assertions of panthers’ forest dependence (Beier et al, 2003, page 6).

It also played an important role, by some accounts, in the regulatory failure to protect panther habitat.

The chief culprit in this failure is the USFWS. The ESA requires the service to issue a “biological opinion” on any action by a federal agency that may jeopardize the survival of an endangered species. Because of the hydrology of southwest Florida, development almost always requires a wetlands destruction permit from the Army Corps of Engineers and therefore requires USFWS consultation. In a recent exposé, the *St. Petersburg Times* reported that USFWS has not issued a single ‘jeopardy opinion’ since 1993: “Former agency employees say every time they tried, ‘we were told that, politically, it would be a disaster’” (Pittman, 2010a). In the last fifteen years the agency approved the destruction of 42 000 acres of panther habitat, mostly in Collier County (the largest project to date is Ave Maria). Citing personal reports from USFWS employees, a 2002 scientific paper contended that “narrowly defined forest-centered characterizations of habitat suitability ... are used to support the argument that no restrictions should be placed on the development of unforested land” (Comiskey et al, 2002, page 18). In the same year Maehr and a coauthor proposed a panther habitat evaluation methodology for permitting reviews that was subsequently adopted by USFWS (Maehr and Deason, 2002). The methodology “assumes that habitat mosaics of marsh, prairie, other nonforested native cover, and agricultural lands are of no value to panthers” (Comiskey et al, 2004, page 66). USFWS biologists raised objections to the methodology but were ignored; one was fired in 2004 after filing a whistleblower suit (Kostyack and Hill, 2005). In short, the forest-dependence theory facilitated the service’s approval of the destruction of tens of thousands of acres of panther habitat from the mid-1990s onward (Gross, 2005).

By 2001, scientific controversy regarding panthers “had become so entrenched and personalized that the USFWS and [Florida Fish and Wildlife Commission] requested an independent review of scientific literature” (Beier et al, 2006, page 236). The Scientific Review Team reported in 2003 that Maehr’s theory and habitat assessment methodology were based on unreliable inferences and flawed methodologies (Beier et al, 2003; 2006), including a reliance on radio telemetry data gathered only during daytime, although the panther is most active at night. In 2002 five scientists published a paper asserting, on the basis of field observations in addition to telemetry data, that panthers are not forest obligates but rather habitat generalists that use “the broad spectrum of available habitats for hunting, resting, mating, travel, denning, and dispersal” (Comiskey et al, 2002).

In 2000 USFWS commissioned a team of scientists, known as the Panther Subteam of the Multi-Species/Ecosystem Recovery Implementation Team (MERIT), to develop a landscape-scale strategy for panther conservation and recovery. The MERIT Subteam completed its report in August 2002. Drawing upon a range of evidence—land-use/land-cover data, tracking, satellite imagery, and modeling data, in addition to radio telemetry—they found that panthers prefer forested areas but that they use forest patches of all sizes, and that “a more heterogeneous landscape characterized by an interspersion of forest and non-forest patches” is critically important for the maintenance of prey species (Kautz et al, 2006, page 128). The subteam produced a Panther Habitat Map that delineated three habitat zones: the primary zone “generally supports the present population, and is of highest conservation value”; the secondary zone “is of lesser value but could accommodate expansion of the population given sufficient habitat restoration”; and the dispersal zone could “accommodate panther dispersal outside of south Florida” (Kautz et al, 2006, page 118; see figure A2 in the online appendix). Thus, “the primary zone covered a vast swath, purposely including not just forests and swamps but also pastures, citrus groves and other areas not usually associated with panthers. If they had confined their work to the remaining South Florida wilderness, the result would have been ‘a Swiss cheese map’”, a team member said (Pittman, 2010b). However, a USFWS

official questioned whether the map covered “more area than is necessary”, and the report was shelved (Pittman, 2010b). The researchers subsequently published their findings in *Biological Conservation* in 2006, highlighting the primary zone as a management priority (Kautz et al, 2006, pages 129, 131).

USFWS finally revised its habitat assessment methodology in 2005 and its Florida Panther Recovery Plan in 2008 in accord with the MERIT Subteam’s findings, thus effectively identifying this research as the ‘best available science’ (USFWS, 2008). At a meeting of the Collier County Planning Commission in 2009, a University of Florida professor and MERIT Subteam member testified:

“Everything that we know about this species, it cannot be just about forest . . . [Y]ou want to avoid land use conversion within the primary zone . . . avoid reduction or degradation of the habitat base; avoid reduction in total area; avoid landscape fragmentation; avoid land use intensification, including transportation infrastructure” (CCPC, 2009, pages 41, 30).

But the RLSA was designed before the release of either the MERIT Subteam’s or the Scientific Review Team’s report. Its delineation of sending and receiving areas thus did not incorporate the new habitat zoning. As Ryan of the Conservancy explained to me:

“you could actually have all of your development in primary panther habitat and none in secondary because those areas are all considered ‘open’ When a landowner can put their development outside primary panther habitat and they simply choose not to, then that to me shows the fatal flaw in this plan” (interview, 27 July 2010).

The Conservancy calculated that a 45 000-acre footprint would result in at least 10 618 acres of development in the primary zone (letter to USFWS, 1 July 2008). They produced an alternative “Vision Map” that identified nearly 45 000 acres for potential development exclusively in the secondary zone, but it was rejected by the other FPPP participants because, as a Defenders of Wildlife representative told me, “They didn’t take into account [land] ownership patterns” (interview, 9 July 2010).

The ESA requires HCPs to avoid, minimize, and mitigate impacts to listed species and habitat, in that order. In other words, as the Conservancy notes, “Avoidance is the first principle” (letter to USFWS, 1 July 2010). Thus the Collier HCP “should be about placing development into more appropriate locations . . . , not about providing mitigation for avoidable impacts.” In its HCP application, however, ECPO proposes no alterations to the existing RLSA framework to avoid development of primary habitat. In fact, “[m]ention of the Panther Primary Zone is entirely absent from the submitted document.”

In January 2009 the Conservancy reached for the regulatory ‘hammer’, petitioning USFWS to designate “critical habitat” for the Florida panther throughout some three million acres in eastern Collier and neighboring counties, based on the new habitat zoning (Conservancy, 2008). The ESA mandates that at the time a species is listed as threatened or endangered, USFWS must also designate habitat that is “critical” to its survival and recovery. The intent and implementing mechanisms of this provision are poorly specified, however, and it has become one of the most controversial components of the ESA. Both landowners and USFWS typically oppose designation, while conservation groups frequently sue to compel it (Patlis, 2001; Baldwin, 2005). Like other advocates of designation, the Conservancy argues that critical habitat is needed because it raises the bar for development approvals, and because it encompasses areas required for species recovery as well as survival.

USFWS rejected the petition in February 2010, after which the Conservancy, joined by three national environmental groups—the Sierra Club, the Center for Biological Diversity, and Public Employees for Environmental Responsibility (plus the south-Florida-based Council of Civic Associations)—filed suit to compel designation. ECPO intervened in the

case on the government's side, and their environmental allies—FWF, Collier Audubon, and the Florida Audubon Society—petitioned to submit an *amicus curiae* brief on behalf of USFWS, in which they contend:

“the designation of Florida panther critical habitat will not benefit panther protection and recovery. Such a process affords little extra protection and will create negative public sentiment to both the designation and the panther Critical habitat is another layer of federal regulation often resented and considered punitive by landowners and local officials. It has the potential to result in a public backlash in occupied panther habitat and in regions selected for reintroduction. Years of litigation will likely overshadow and detract from meaningful efforts for the recovery of the Florida panther.”⁽³⁾

The pro-HCP groups, in other words, were so confident about collaboration that they were prepared to broadly reject the ESA: the ‘pit bull’ of US environmental law and one of the most powerful ‘hammers’ in the regulatory toolbox. Hecker of the Conservancy, in response, declared it “shocking” that any environmental group would “do something so drastic as to intervene against critical habitat designation” and to “say that . . . regulatory approaches are punitive,” given that “critical habitat has been used successfully alongside HCPs throughout the country to provide a greater level of protection to numerous imperiled species” (telephone interview, 2 August 2010).

Misreading the landscape? Science versus ‘local knowledge’

In responding to the Conservancy's critique of the RLSA and HCP, ECPO and their environmental allies not only raise a pragmatic argument about fostering ‘good will’ for panther recovery; they also attack the science underpinning that critique. According to Barron Collier executive Jones, the Conservancy exaggerates the value of eastern Collier County as panther habitat, because they misunderstand this landscape:

“these people really have no idea what they're talking about [They] looked at eastern Collier . . . as some type of a pristine wilderness. When in reality, it's been impacted for the last forty or fifty years” (interview, 2 July 2010).

This misunderstanding, Jones contends, springs from overreliance on abstract, academic science, as opposed to the local knowledge born of working on the land. This local knowledge corroborates Maehr's forest-dependence theory, which, although also scientific in origin, Jones portrays as more rooted in on-the-ground experience:

“you can do models or you can look at data So if you look at the models, you come up with this map that shows this vast expanse of primary habitat. And depending on how you set up your model, you can make that thing just bigger and bigger and bigger And then if you actually look at the data, you could come up with a significantly different map Now the big criticism [of Maehr's research] was always, well, that's just daytime telemetry. That held up for a number of years, [but] it didn't hold up with actual observations of people who were out there all the time, people that farm those lands. I mean, we know what goes on in those fields. I've honestly never come upon a panther in the middle of a tomato field. And I spent a good fifteen years out there, pretty much every day.”

Collaboration proponents often “endorse a results-oriented approach emphasizing on-the-ground ecosystem conditions as the basis for decision making and evaluation of policy success [F]ield inspections—walking tours—involving a full cross-section of members are used to examine the physical condition of the landscape” (Weber, 2000, page 253). According to Jones, a turning point in the relationship between ECPO and the initially hostile FWF and

⁽³⁾United States District Court for the Middle District of Florida Fort Myers Division, Case 2:10-cv-00106-JES-SPEC, Document 50, filed July 19, 2010.

Collier Audubon representatives came when they joined him on just such a ‘field inspection’ of a Barron Collier property:

“We drove Nancy [Payton] and Brad [Cornell] out to [what was delineated as] a wetland one day in the mid-2000s, when we were in the process of permitting Ave Maria. Drove my truck out into the middle and just sat there, and I said, ‘This is the one of the biggest wetlands areas we’re impacting.’ And it was like, ‘You’re kidding me!’ ... I mean, it was bone dry. It’s always bone dry. It had drainage ditches around it, through it. It had been farmed since the ’50s.”

This visit, Jones implied, enabled Payton and Cornell to see the landscape from the landowners’ perspective. Indeed, when I questioned Payton about the habitat zoning controversy, she was as dismissive as Jones of the new academic consensus:

“Oh, this [ridiculous] primary panther habitat is based on static, old, sometimes twenty-year-old data. It is not the best available science ... I think it’s more important to look at where panthers are actually going, the true habitat, rather than some GIS document that’s generated by someone in your university. Who probably has spent very little time on the ground, ground-truthing it, and most of the GIS data is years old” (interview, 27 July 2010).

In other words, she rejected the new scientific paradigm as based on “old data” developed by ivory-tower academic modelers (even though it is based on multiple data sources, including recent field observations), and pronounced it less reliable than “on-the-ground” knowledge of “where panthers are actually going.”

In sharp contrast, the Conservancy’s Hecker defended the new habitat-generalist narrative by valorizing scholarly knowledge production. The MERIT Subteam’s 2006 paper, she observed, “went through incredible scientific peer review and it was published in a scientific journal” (telephone interview, 2 August 2010). Faith in scientific expertise, Hecker suggested, structures the organization’s approach to collaboration. The Conservancy based its negotiating position on the MERIT paper

“because it was recognized by the US Fish and Wildlife Service as the best available science and was utilized in the Florida Panther Recovery Plan. The areas depicted as ‘primary zone’, essential to supporting the current panther population, were the basis of the nondevelopment areas in the Conservancy’s Vision Map. Having a defined vision based on science allowed the organization to have a clear reference point in the negotiations, knowing what concessions by the landowners would be enough to provide a sufficient level of protection for the panther” (personal communication).

From a political ecology perspective, the new habitat zoning can be seen as a potent science-based environmental narrative, wielded by powerful government and environmental actors, on behalf of a protectionist paradigm that seeks to exclude local land uses from certain spaces. The political ecology literature is replete with stories of such narratives providing the justification to evict local people from protected areas, or to prescribe or proscribe particular land-use practices. Fairhead and Leach (1996), for example, consider a region in Guinea where forest meets savanna, forming a matrix of grassland and forest patches. In the dominant narrative reproduced by scientists and colonial administrators, this matrix was evidence of land degradation due to deforestation by local people. But Fairhead and Leach draw on historical documents to demonstrate that this was a ‘misreading’ of the landscape: rather than a forest emptying of trees, it was actually a savanna filling with forest, partly as a result of human habitation and land use. This misreading “justified state action to take resource control from local inhabitants, and repressive policies to reorientate what has been seen as destructive land management” (1996, page 4). The local knowledge of area residents was in line with the more accurate afforestation narrative; Fairhead and Leach therefore call for

“pluralism within ecological science” and “an incorporation of land users’ own perspectives and conceptual frameworks” (page 10).

The political ecology perspective thus invites skepticism regarding the notion of ‘best available science’ in general and the new panther habitat narrative in particular, and sympathy for Jones’s ‘local knowledge’ claims. But does it make sense to apply the political ecology paradigm, grounded in Third World colonial and postcolonial settings, to the radically different political–economic context of the First World? Analysts of US collaboratives implicitly do so. The following statements, for example, could well have been made by Third World political ecologists:

“[Grassroots ecosystem management] relies on ‘folk knowledge’—the individual and collective expertise of those community members most familiar with a particular problem and ecosystem capacities” (Weber, 2000, page 252).

“Collaboratives embrace the importance of scientific knowledge and expertise, but at the same time seek to expand the concept of expertise beyond bureaucratic and organized interest expertise Explicit attempts are made to integrate scientific knowledge and technical expertise with local knowledge” (Brick and Weber, 2001, page 19).

“Policy makers must be very careful in awarding special status to science in policy deliberations By virtue of its descriptive powers, science can accidentally become a privileged member of the group The outputs of science, maps, computer images, and tables of numbers can often act as bullies on the school playground” (Burchfield, 2001, pages 239–240).

In the Collier case, however, it makes little sense to view the relationship between ‘big science’ and ‘local knowledge’ in this way, because the power dynamics in which this relationship is embedded are so different from those studied by Third World political ecologists. Undeniably, people like Tom Jones possess certain types of place-based knowledge about the landscapes in which they work. But this is not the ‘folk knowledge’ of marginalized rural dwellers, born from historically rooted livelihoods that are under attack by powerful state and conservation actors. Rather, it is knowledge that supports the interests of powerful local elites seeking to shift from agriculture to more lucrative real-estate development. It seeks to reclaim the hegemony of a particular scientific narrative (Maehr’s forest-dependence theory) that for years was wielded by the state to the benefit of those interests. And now that USFWS has affirmed the new habitat-generalist theory as ‘best available science’, this ‘big science’ narrative, with its ‘maps and computer images’, may prove to be the most potent weapon in the skeptical environmentalists’ struggle to resist the neoliberalization of nature. This case, like that of the Wise Use movement analyzed by McCarthy (2002, page 1298), thus calls into question political ecology’s “predispositions” and “serv[es] as a reminder that local agendas are not inherently more legitimate than state or environmentalist agendas.”

Moreover, unlike the many Third World cases where preservationist narratives have been empowered through alignment with state projects of colonialism or nationalism (MacDonald, 2011, page 73), here the Conservancy’s preservationism is *opposed* by the state. Recall that at USFWS, critics of Maehr’s methodology were ignored, a whistleblower was fired, and the MERIT Subteam’s report was shelved for years. Although USFWS has now formally embraced the new panther science narrative, it rejected the Conservancy’s petition to designate critical habitat based on that narrative, and in an interview the service’s regional director for South Florida insisted that “working together in partnership . . . with private landowners” was the best way to foster panther restoration and recovery (interview, 3 August 2010). In short, not preservationism but collaboration is hegemonic today.

Conclusions

In the neoliberal era, “the idea that capitalism can and should help conservation save the world now occupies the mainstream of the conservation movement” (Brockington and Duffy, 2011, page 2). Through its embrace of neoliberal approaches, the “environmental movement, once organized in opposition to economic growth, has instead become its conduit”, helping to create “new symbolic and material spaces for global capital expansion” (Corson, 2011, pages 128, 110). Yet “it is not at all clear that these shifts achieve demonstrable gains for the conservation of biological diversity” (MacDonald, 2011, page 70). As McCarthy and Prudham (2004, page 278) point out, however, environmentalism’s response to neoliberalization has been ambivalent: while “[m]any environmentalists have adopted elements of neoliberal ideology and discourse”, others have effectively resisted neoliberal projects. The Collier case illustrates this ambivalence.

This ambivalence is reflected also in the contrasting assessments of the ‘quieter revolution’ by its analysts and practitioners, and, I have argued, in the contradictory lessons that may be drawn about it from political ecology. The embrace of voluntary and collaborative methods can be celebrated for valorizing local knowledge and control against powerful state and conservationist actors wielding science to enforce exclusionary land-use regimes. But in the First World context of Collier County, it is more useful to view this embrace through the prism of neoliberalization, recognizing that the discourse of local knowledge and livelihoods aligns with the (anti-environmental) interests of powerful actors.

With Florida yet to emerge from the current real-estate bust, it will be some time before the environmental impacts of the RLSA and proposed HCP can be assessed. In the meantime, the relationship between the state and local ‘growth machines’ has entered a new phase, thanks to the election in November 2010 of an ultraconservative governor and supermajority in the state legislature, who prioritized the rollback of ‘job-killing’ regulations. A key component of this neoliberal agenda was a sweeping repeal in 2011 of the state’s 1985 growth-management law. DCA was demoted to a division within a new Department of Economic Opportunity and stripped of most of its authority over development permits and amendments to local comprehensive plans. That authority is now in the hands of local government. It remains to be seen whether the panther will survive the ongoing neoliberalization of nature in Florida. Clearly, however, the Collier case demonstrates the need for more biophysical research on the environmental *outcomes* of ‘quieter revolution’ approaches, so as to avoid conflating outputs (formally preserved acreage) with outcomes (functioning natural processes).

Power dynamics in the field of growth management and conservation have shifted: the collaborative, market-based, win–win approach has displaced top-down preservationism as the hegemonic paradigm. Yet the relative inattention to this shift by political ecologists has left unchallenged assumptions about the need to valorize and empower the local, and about the virtues of ‘win–win’ collaboration in protecting nature values. There is, thus, a great need for more ethnographic, micropolitical research as well, which can dig beneath the surface of ‘preserved acreage’ and environmentalist endorsements to closely examine the ‘devil in the details’ of specific projects. This research must reinvestigate the power dynamics of ‘stakeholder collaboration’ in a First World setting, where ‘big science’ is not always dominant over ‘local knowledge’.

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Wind of Change: Overcoming Misinformation in New Jersey's Clean Energy Transition

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Executive Summary: As the climate crisis advances, the need to transition from the fossil fuel economy to renewable sources of energy is becoming increasingly urgent. Thanks to climate leadership from the Murphy administration, New Jersey is poised to grow its renewable energy projects in an aggressive attempt to reach 100% clean energy by 2035. However, the state is currently facing pushback from local anti-offshore wind groups, such as Protect Our Coast, which actively disseminate false information about offshore wind (OSW) development and attempt to thwart NJ climate action. To address the growing threat of misinformation, New Jersey should build upon its existing climate education campaign and expand it to entire local communities. Allocating resources towards a dedicated public media campaign can effectively educate citizens and help dispel misinformation surrounding renewable energy initiatives, fostering greater support and understanding among New Jersey residents.

I. Introduction

In 2020 the World Health Organization (WHO) declared an infodemic - an excess of information, especially incorrect and misleading information in the age of the internet and social media (Zarocostas, 2020). False narratives, inaccurate facts, and intentional misinformation campaigns can spread doubt and uncertainty among the public, resulting in lower support for critical policies and actions (Cook et al., 2018). Fossil fuel firms, global polluters, and their associates have spent millions of dollars to distribute inaccurate and misleading content. According to one study, 16 of the world's largest polluters were responsible for more than 1,700 of these disingenuous advertisements on Facebook in 2021. These ads received over 150 million impressions and earned the platform nearly \$5 million (Turrentine, 2022).

As the climate crisis advances, the need to transition from the fossil fuel economy becomes increasingly evident. Discussions about climate protection now primarily focus on the necessity of decarbonizing the energy industry by incorporating renewable sources

of energy (Krishnan et al., 2022). The US is falling behind China in wind energy generation (Figure 1) and falling far behind many other countries in overall renewable energy generation. New Jersey is set to ramp up its renewable energy projects in one of the nation's most aggressive attempts to reach 100% clean energy by 2035 (Governor Murphy's Office, 2023).

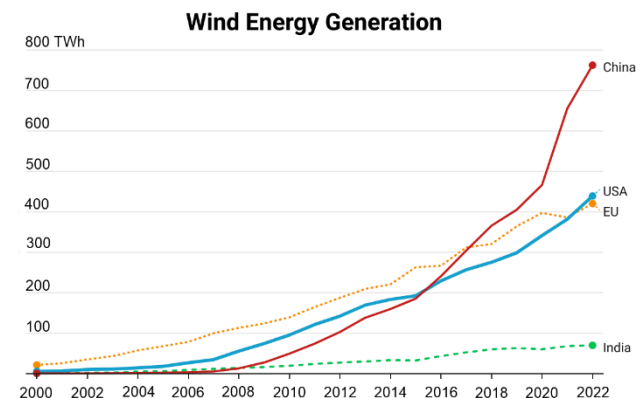


Figure 1: Global Wind Generation (Energy Institute, 2023).

However, the state is currently facing pushback from local anti-offshore wind groups. Protect Our Coast and similar groups engage in a practice called astroturfing: hiding their corporate or institutional sponsors to make their message and organization appear as a grassroots movement. Protect Our Coast receives funding from organizations like the Caesar Rodney Institute, a think tank connected to the fossil fuel industry (Selig, 2023). They actively disseminate false information and encourage residents with “energy privilege” to delay renewable energy projects in wealthier communities which leads to continued pollution in low-income communities and communities of color (Stokes et al., 2023).

II. Findings

Anti-renewable groups purposefully disseminate false information concerning renewable energy and climate change. Their goal is to discourage local residents from supporting renewable energy projects. They are succeeding. A recent poll from the Monmouth University Polling Institute illustrates how support for wind energy has fallen by 30% in the last decade (Figure 2). A similar poll by Stockton University found similar results with 80% of adult New Jersey residents supporting offshore wind farms in 2019, followed by a drop to 50% in 2023. Opposition more than doubled over the same time period (*Wind Energy*, 2023). The findings of the Monmouth University poll highlight the need for a proactive approach from the state and wind industry in engaging with communities. Tony MacDonald, director of the Urban Coast Institute at Monmouth University, made one of the report's final recommendations, which read as follows: “Clearly the state and wind industry have to do a much better job in reaching out to communities to demonstrate the economic and environmental benefits of these projects, as well as to counter misinformation about threats to tourism and threats to whales” (2023).

One of the most common reasons residents cited for opposition to offshore wind stems from a common point of misinformation: the false belief that offshore wind turbines kill whales. The Monmouth University Poll shows 45% of residents believe turbines harm whales to some degree (2023). Despite there being no evidence to implicate wind turbines in whale deaths, it remains a popular talking point for anti-renewable energy groups (Selig, 2023). These groups fabricate numbers and sensationalize the

threat to wildlife in an attempt to dissuade uninformed residents. This is particularly troubling as recent studies state believing in a particular conspiracy theory about the development of the wind farm increases resistance to voting in favor of a potential wind farm in their community (Winter, 2022).

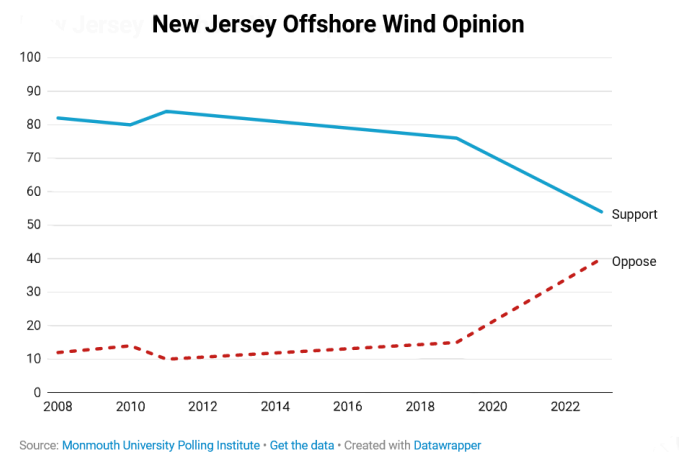


Figure 2: Support for Offshore Wind Energy (Monmouth University Polling Institute, 2023)

Misinformation does not merely result in misinformed citizens, it has far-reaching impacts that span beyond the locality of any single energy plant. In the US, wind energy opposition is concentrated in the Northeast. While the Northeast accounted for only 14% of all US wind projects between 2000-2016, it was home to 25% of those that faced opposition. Overall, 31% of projects in the northeastern United States faced opposition (Stokes et al., 2023). According to a recent Department of Energy report, setback regulations, which limit how close wind projects can be to buildings, are now the single most significant impediment to securing wind project sites in the United States (Lopez et al., 2021). Misinformation can create unnecessary setbacks and even outright bans on renewable energy. According to researchers, the purpose of misinformation in many anti-renewable groups is to raise doubts about renewable energy, thereby stalling or derailing initiatives (Simon, 2022). The impacts of misinformation are not limited to the locality of any given renewable energy project. Stokes et al's analysis of 1,184 wind energy projects in the US found that race and ethnicity appear to play an important influence in forecasting both the occurrence and degree of opposition. Wind projects in areas with a higher percentage of White people

and a lower percentage of Hispanic people were more likely to meet opposition, at more intense levels, and use a wider variety of opposition strategies. The study coined the term “energy privilege,” which states that the delay and cancellation of renewable energy in wealthier, whiter neighborhoods extends the lifespan of polluting fossil fuel plants that are predominantly located in poorer communities and communities of color (Stokes et al., 2023).

The US is currently in the middle of an infodemic, and experts claim it is currently easier to find popular points of misinformation than it is to find evidence-based information (Zarocostas, 2020). This is due in part to the nature of research production and dissemination. In the US, academic institutions and prominent think tanks often place up-to-date evidence behind paywalls. Worse yet, these research findings are often written in unnecessarily enigmatic language that is difficult for the public to understand. The lack of open access to up-to-date scientific information and the growing struggle to adapt scientific communication for the digital world has left a gap in the information available to citizens. To fill this gap, the state should build upon its existing climate education campaign to directly address the growing threat of misinformation.

New Jersey has already shown its dedication to comprehensive climate education, as the first state in the nation to mandate climate education be added to the K-12 curriculum (Fasano, 2022). It is recommended that the state build off its existing climate education curriculum and expand to entire local communities, as opposed to just schools.

III. Recommendation

Allocating resources towards a dedicated public media campaign can effectively educate citizens and help dispel misinformation surrounding these initiatives, fostering greater support, and understanding among New Jersey residents. The goal is not to force residents to support renewables; the goal of this campaign is to fill a gap in public education, striking a balance between combating misinformation and protecting free speech.

New Jersey can learn from how other states have handled easing the public through the energy transition. The most notable example is Rhode

Island; this state faced similar challenges from anti-offshore wind groups last year when an offshore wind project was announced. An in-depth review of these groups by Brown University’s Climate Education Lab found that combating misinformation at a local level is now essential to the success of renewable energy (The Climate and Development Lab, 2023).

i. Public Q&A sessions

Public forums for professionals to address community problems and Q&A sessions on renewable energy initiatives can foster open dialogue, benefit residents, and address concerns and skepticism. Analyses of surveys, experiments, and interview data converge to illustrate that support for wind farms is strongly correlated to people’s sense of equity, integrity-based trust, justice, and fairness (Winter, 2022). These sessions are necessary to ensure that residents feel a sense of procedural justice which has been linked to increased wind farm acceptance (Winter, 2022). These sessions could be modeled after the Bureau of Ocean Energy Management (BOEM) in-person open house meetings, promoting transparent and informative interactions with the community (What to Expect at the In-Person Open House Public Meetings, 2023).

ii. Media collaborations

Collaborate with local media for factual reporting and public engagement, promoting renewable energy initiatives, and debunking misconceptions through social media to foster informed discourse. This should include closer partnerships with environmental non-profits/coalitions such as the Wind Works Coalition (New Jersey Wind Works) whose member organizations are committed to disseminating evidence-based information. Their efforts to educate the public are hamstrung when they are kept at arms-length with limited access to the most up-to-date information. When misinformation about whale deaths was spreading rapidly in early 2023, the New York State Department of Environmental Conservation hosted a timely webinar called “Whale Tales & Whale Facts” to address the concerns that were not being assuaged by dismissive/suspicious statements that there was ‘no evidence’ of a connection (New York State Department of Environmental Conservation). The NJDEP could similarly be more transparent

about the science and logic that support its positions.

iii. Credible experts and testimonials

Include testimonials from residents and businesses who have benefited from renewable energy projects. Local authority's support for the wind project is listed as a highly influential factor in generating favorable views toward wind farms (Winter, 2022). The Offshore Wind Research & Monitoring Initiative (RMI) could be amended to require that all grant-funded projects include a public education component that goes beyond the K-12 and postsecondary age groups. There is a large opportunity gap between the public's desire to hear more from scientists, and scientist's willingness to engage in public discourse.

iv. Improved messaging

Going forward, messaging should emphasize the unique benefits of OSW, which has the shortest carbon payback period of any current renewable energy technology, is complementary to solar, and leverages NJ's geography (*Offshore Wind*). Although the state of NJ is a pioneer in the context of the US, it is important to show that the state is not unique in the global context. The technology is not new and has been used successfully for 30+ years. In fact, the US is far behind Europe and Asia in the scale and pace of its OSW development (National Academies of Sciences, Engineering, and Medicine, 2021).

Additionally, messages should be crafted with misinformation trends in mind. An awareness of the common ways that information is being misconstrued could help department representatives steer clear of embarrassing or inaccurate statements. This includes avoiding statements like 'we're building the plane while flying it' which implies a haphazardness to this undertaking. Offhand comments like this do a disservice to the depth of local expertise that is being tapped for research and the very long and thorough planning process that has been ongoing for decades.

Lastly, environmental justice should be kept at the forefront. Support for wind farms is primarily shaped by people's sense of equity, integrity-based trust, justice, and fairness (Winter, 2022). Highlight wind energy's role in addressing historical

environmental injustices brought on by fossil fuel plants predominantly located in poorer communities and communities of color.

v. Advantages

Advantages of a public media campaign include authentic engagement and the development of relationships within the community. In the face of climate change it is essential that NJ cultivates a more informed electorate, better equipped to make informed decisions regarding climate mitigation and adaptation. Public education and communication campaigns serve as a form of pre-bunking and successfully lower people's susceptibility to false information and conspiracy theories.

vi. Challenges

Challenges include the time and financial resources required to support small-scale education efforts. Additionally, higher levels of transparency than typical infrastructure projects may be required, increasing the need for information sharing and public engagement. This is especially important as opposition groups seek to characterize conventional aspects of infrastructure development as being unique to the technologies they lack familiarity with.

vii. No action alternative

Without implementing a combination of the aforementioned recommendations, support for renewable energy initiatives is likely to continue to decline, while the opposition further fueled by the hyper-partisan nature of wind energy will continue to rise. This has and will continue to lead to disruptive activities such as lawsuits, slow-walking local permits, delayed project timelines, increased prices, and greater uncertainty in the renewable energy sector.

IV. Conclusion

Most New Jersey residents care about climate action and want sustainable cities. An education campaign will go a long way in disrupting echo chambers and climate misinformation. Once misinformation is off the table, it may be easier for NJ residents to see the connection between rising sea levels and the need for renewable energy. This increased awareness can lead to more informed decisions and greater support for the state's ambitious clean energy goals, fostering a brighter, more sustainable future for all.

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