Oceanic Solutions – Introduction & Offshore Wind

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1. Introduction

First of all, this is my second paper with the "Oceanic Solutions" title, but the first was over two years ago. I just reviewed the earlier paper and though it was good for its time (and your author's level of knowledge on this subject at that time), it is really out of date. Furthermore, recently much has happened that involves the oceans.

This subject is the ultimate elephant in the room – 71% of the earth's surface is covered by oceans, and this percentage is growing pretty rapidly.

Rain forests may be known as the planet's lungs, but it's when standing before the seas, with their crashing waves and ceaselessly cycling tides, that we feel the earth breathe. The ocean, say scientists, is the source of all life on earth. It is also, say philosophers, the embodiment of life's greatest terror: the unknown and uncontrollable.[1]

This duality has become increasingly manifest in the climate discourse of recent years, as ice melts, seas rise, and shores everywhere face storms of a ferocity unseen in living memory. But even as the ocean has become the subject of hand-wringing over what we've wrought, it has also become a keystone of hope that we may limit the damage if we act now.

First, the bad news. While the front lines of climate change are emerging all around the globe, the first major wounds of global warming occurred in the low-lying island nations of the South Pacific, where communities have always lived and died by the sea and its bounty. For years now, there has been far more dying, as they have been ravaged by climate-change related storms and flooding. When these countries have implored larger and wealthier and more culpable-countries to do something, they have mostly been met with silence. Indeed, at a recent summit in Bonn, Germany, delegates from wealthy nations refused to support an effort to make sure that discussion about compensating poorer countries for climate-change damages would be on the agenda for COP.27, the U.N. climate conference set to be held this November in Egypt. But it won't be long before these powerful nations are facing the sea's wrath too. The U.S., U.K., Germany, Brazil, China, India, Japan, and Indonesia are all among the countries with large populations living on land likely to be below sea level by 2100.

Other escalating tragedies are at hand beneath the waters that make up over 70% of earth's surface, from coral mass-bleaching events to the destruction of marine biodiversity. There is no going back. But to keep the damage to these already awful levels-and to even daydream of meeting the target the world theoretically agreed on in Paris back in 2015-we'll have to find some way to work with, and not against, the sea. As Jane Lubchenco, marine ecologist and former head of the National Oceanic and Atmospheric Administration under President Obama, told my colleague Aryn Baker a

[1] Elijah Wolfson, Time (hardcopy), July 4 / 11 Issue, Page 57, "Waves of Change, A Special Report," To order a copy of a Time issue, call 800-843-8463.

couple of years ago, "It's time to stop thinking of the ocean as a victim of climate change and start thinking of it as a powerful part of the solution!'

2. This Series

I will use three major sources for this Series:

- The above-referenced issue of Time Magazine
- Other hardcopy and web articles
- My previous papers.

As of right now this series will cover the following subjects,

- U.S. Offshore Wind Summary (below)
- Tidal Power
- Ships and Shipping
- Coastal Sea-Level Mitigation

3. U.S. Offshore Wind Summary

I've covered the subject of this section both thoroughly and frequently. Thus all I will do below is to send my readers to two recent posts.

Currently all of the offshore wind activity in the U.S.is on the East Coast. The first significant new project (Vineyard Wind) will be transmit first power in 2023 and be completed in 2024, and several additional large projects will be completed or start transmitting large amounts of power between 2023 and 2025.

Additionally there are two large Wind Energy Areas on the East Coast where the Bureau of Ocean Energy Management (BOEM) held lease auctions earlier this year (New York Bright and Carolina Long Bay).

On the West Coast the first two major Wind Energy Areas are where BOEM is heading towards lease auctions later this year (Humboldt and Morro Bay).

The first post covers the projects that are within a few years of completion.

Offshore Wind Early 2022: This post will focus on East Coast Offshore Wind projects that will either be commissioned by 2025 and/or are very large and important projects that will generate substantial first-power in 2025.

Each section starting with section 2 will cover a single project.

https://energycentral.com/c/cp/offshore-wind-early-2022

The second post covers lease auctions.

Offshore Wind Late Spring, 2022: The last post on this subject was on the first day of March. This one is posted on the last day of May.

The Bureau of Ocean Energy Management (BOEM) has held two important East Coast auctions, and tentatively scheduled the first West Coast auction.

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