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**HOUSE BILL 2341**

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**State of Washington**

**68th Legislature**

**2024 Regular Session**

**By** Representatives Springer and Chapman

1 AN ACT Relating to directing the University of Washington to  
2 conduct a study on the cumulative effects of offshore wind  
3 development on the oceanographic processes of the Pacific Ocean; and  
4 creating new sections.

5 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF WASHINGTON:

6 NEW SECTION. **Sec. 1.** (1) Washington state, along with much of  
7 the United States and many parts of the world, is experiencing an  
8 extraordinary transformation as it reduces the amount of electricity  
9 generated by fossil fuels and increases the amount of electricity  
10 generated by renewable resources such as wind and solar. Though the  
11 global transition away from electricity generated by fossil fuels may  
12 be a relatively recent one, Washington state has long been a leader  
13 in carbon-free electricity generation, thanks to the mighty power of  
14 the Columbia river. The hydroelectric generating capacity of the  
15 Columbia river dam system has produced carbon-free electricity to  
16 power tens of millions of homes in Washington, the Pacific Northwest,  
17 and the nation for nearly a century.

18 (2) Unfortunately, the blessings of the Columbia river's  
19 hydroelectric generating capacity have come at a price. The dams that  
20 produce that electricity have also blocked thousands of miles of  
21 salmon habitat, with the result that 10 population groups of salmon

1 that utilize or transit through the Columbia river system are now  
2 listed as threatened or endangered under the federal endangered  
3 species act, and many billions of dollars have been spent on salmon  
4 recovery efforts. As one particularly acute example of this trade-  
5 off, the power produced by the Dalles dam on the lower Columbia river  
6 comes as a result of submerging Celilo Falls, which for thousands of  
7 years was one of the most productive and culturally significant  
8 salmon harvesting locations along the Columbia river. It is fair to  
9 ask whether, knowing what we know now, we would have made the same  
10 choices a century ago to trade the health of our salmon runs for low-  
11 cost hydroelectricity.

12 (3) Washington state faces a similar question as we contemplate  
13 the development of offshore wind generating facilities along the  
14 Pacific Coast of Washington, Oregon, and California. The eastern  
15 Pacific Ocean is one of the richest, most productive marine  
16 ecosystems in the world. The fisheries supported by these ecosystems  
17 feed the world and in doing so they support Washington fishers and  
18 their families from Ilwaco to Neah Bay to Anacortes. It would be a  
19 grave mistake to sacrifice the health and productivity of the Pacific  
20 Ocean marine ecosystem on the altar of carbon-free electrons.

21 (4) Many questions remain concerning the effect of offshore wind  
22 turbines on oceanographic processes. Wind turbines can reduce the  
23 amount of energy in the wind, which can then create a lower energy  
24 wake behind the wind turbine facility. This reduction of the energy  
25 in wind can cause lower energy waves, with the result that there is  
26 much less mixing in the ocean surface layer. This, in turn, depletes  
27 the oxygen level in the water, which then reduces the amount of  
28 foundational food sources like zooplankton.

29 (5) Although the potential risks of offshore wind generation may  
30 be clear, little is known about the magnitude or likelihood of that  
31 risk. Where so much depends on a healthy Pacific Ocean marine  
32 ecosystem, it is imperative that Washington be able to properly  
33 assess any potential risks to that ecosystem.

34 (6) For these reasons, the legislature finds that it is  
35 appropriate to direct the University of Washington, home of one of  
36 the premiere oceanographic departments in the world, to study the  
37 cumulative effects of offshore wind generation on the oceanographic  
38 processes of the Pacific Ocean.

1        NEW SECTION.    **Sec. 2.**    (1) The University of Washington school of  
2 oceanography shall conduct a comprehensive scientific study on the  
3 cumulative effects, both positive and negative, of offshore wind  
4 development on oceanographic processes such as tides, waves, and  
5 currents, and in turn how changes in those processes could affect the  
6 broader marine ecosystem.

7        (2) The topics that the University of Washington must address in  
8 the study include, but are not limited to:

9        (a) The impact that full projected build-out of offshore wind  
10 generation along the western coast of the United States is likely to  
11 have on ocean upwelling;

12        (b) The capacity for offshore wind turbines to both attract and  
13 repel fish and marine life; and

14        (c) The physical effects associated with wind turbine  
15 construction and operation, including water cloudiness, noise,  
16 vibrations, and disruptions to electromagnetic fields.

17        (3) The University of Washington shall submit a copy of its study  
18 to the office of the governor and to the committees of the  
19 legislature with jurisdiction over energy and fishing by June 30,  
20 2026.

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