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An Emerging Threat:

Impacts of Wind Energy Production on DoD Operations and Their Legal Implications

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With hundreds of military training routes (MTRs), ranges and important radar systems in potentially viable wind energy development areas, there is an ever increasing risk of **unacceptable impacts** on DoD operations and military readiness.

Wind energy is becoming a more prevalent source of energy in the United States. As of August 2019, there are over 57,000 wind turbines operating in 41 states and two U.S. territories, with a total wind capacity of 97,960 megawatts (MW). This is enough energy to power over 30 million homes and reliably supply more than 20 percent of the electricity in six states.[1] Wind energy development is also rapidly expanding. There are over 200 wind energy projects underway in 33 states, which will increase installed wind capacity by more than 25 percent in half of the U.S. states.[2] With hundreds of military training routes (MTRs), ranges and important radar systems in potentially viable wind energy development areas, there is an ever increasing risk of unacceptable impacts on DoD operations and military readiness.

As wind energy development expands and technology improves, the impact on the DoD is expected to worsen. While wind energy proponents claim wind energy projects are compatible with national security and do not change military missions,[3] the reality is that the military often accepts some diminishment of missions or operational capability as a result of these projects. This typically comes in the form of a reduction of military airspace, reduction of the size of established MTRs or diminished radar functionality, which[4] may cause cumulative adverse impacts up to and including the failure of operations, missions and systems.[5] As wind energy development expands and technology improves, the impact on the DoD is expected to worsen. Advancements in turbine technology now allow for massively taller wind turbines, which may further erode operational capabilities of radar systems and training operations, bringing several operations and radar systems to the brink of unacceptable adverse impact. In fact, new turbines soon hitting the market for offshore use are significantly (45%+) taller than traditional wind turbines—over eight hundred fifty feet tall (nearly the height of the Chrysler Building less the spire)—with blades longer than a football

field (three hundred fifty one feet).[6] These taller turbines threaten to create even greater adverse impacts to low-level MTRs, military airspace and the operational capacity of essential radar systems. In order to address the adverse impact to military operations and readiness, potential wind energy projects are routed through a dedicated official in the Pentagon for DoD review. While wind energy developers and DoD components typically have excellent and effective working relationships, and initial findings of adverse impacts often are resolved in a way that preserves the viability of the proposed project, the adverse impact to the military is often not completely removed.[7] Typically, this review process results in a negotiated resolution with minor alterations to the proposed project that results in compromises that still limit operational capabilities of military radar systems and the efficacy of existing MTRs.[8]

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In this landscape, yet another threat has emerged—lawsuits claiming that the DoD review process of wind energy projects that result in decreased projected revenue to landowners constitutes a compensable taking under the Fifth Amendment of the Constitution. This article discusses the military's review process for proposed wind energy projects, the recent Fifth Amendment taking claims asserted against the United States, the court rulings in these cases, and their implications.

MILITARY REVIEW OF PROPOSED WIND ENERGY PROJECTS

In 2011, Congress established the Military Aviation and Installation Assurance Siting Clearinghouse ("DoD Clearinghouse" or "the Clearinghouse").[9] The Clearinghouse law made military reviews part of an existing Federal Aviation Administration (FAA) process under 14 C.F.R. Part 77 ("Part 77")[10] that determines whether structures or improvements present a hazard to air navigation.[11] Computerized screening tools assist in assessing which of the thousands of annual Part 77 filings may pose a potential risk to military airfields, MTRs, airspace, and radar systems.[12] If a wind energy project triggers potential risk review, the Clearinghouse distributes available information to appropriate DoD components for an adverse impact review and recommendation.[13] DoD components then review the proposed projects and advise the Clearinghouse of their analysis and recommendation through the chain of command.[14] Within seventy-five days[15] of receipt of the Part 77 application, the Clearinghouse makes one of three potential adverse impact determinations: (1) the project will have an adverse impact on military operations and readiness,[16] (2) the project will not have an adverse impact or (3) the project's adverse impacts are sufficiently attenuated that they do not require mitigation.[17] If the Clearinghouse finds adverse impact, it issues a notice of presumed risk to the applicant and offers to discuss mitigation.[18] The Clearinghouse also notifies the State Governor where the project is located and invites the Governor's comments.[19] Negotiations may result in formal or informal resolution of the DoD concerns.[20] If the applicant does not agree to mitigate or no agreement is reached within a prescribed period (and this period is not extended by mutual agreement), the Clearinghouse must recommend that a senior DoD official make a final determination of whether the project presents "an unacceptable risk to the national security of the United States."[21] Such a finding is extremely rare[22] and has attendant requirements for justifying and supporting such a decision.[23] Even still, the FAA alone makes the final decision on whether the project presents a hazard to air navigation, and considers a DoD "unacceptable risk determination" as but one of several factors.[24]

Some landowners are dissatisfied with the military review of proposed wind energy projects have filed suit against the U.S. claiming that military review of wind energy projects diminished their profits or caused developers to decline to go forward with otherwise viable projects amounting to a compensable taking under the Fifth Amendment.[25]

FIFTH AMENDMENT LAWSUITS RELATED TO CLEARINGHOUSE PROCESS

In the summer of 2018, two landowners filed Fifth Amendment taking claims against the U.S. involving wind energy projects. In the first case, Buddy and Donna Taylor claimed that a wind energy developer cancelled a wind energy development contract on the Taylor's land after DoD officials advised the developer that the Government would not issue a "No Hazard" determination for the project.[26] The Taylors claimed that the inability to secure a "No Hazard" determination was fatal to the wind energy deal and that the Air Force's actions constituted a regulatory[27] taking of their land.[28] The Taylors also alleged that low-level (20-500 feet above ground level (AGL)) overflight activity by the Government was a compensable physical taking[29] of the their land.[30]

> The United States successfully moved to dismiss both the regulatory and physical taking claims.

The United States successfully moved to dismiss both the regulatory and physical taking claims. With respect to the regulatory taking claim, the U.S. argued that the Taylors' failed to allege that they (or anyone else) filed for an FAA hazard determination and that a FAA hazard determination cannot constitute a taking as a matter of law.[31] As to the physical taking claim, the U.S. argued that the plaintiffs failed to allege sufficient facts to establish a claim, particularly with regard to the overflight frequency and substantial interference with property rights.[32] The Court of Federal Claims agreed with the U.S. on both the regulatory and physical taking claims and dismissed the complaint.[33] On appeal, the Taylors asked the Federal Circuit to vacate the dismissal and allow them to amend their complaint. As to the physical taking claim, the Taylors alleged that any flights below 500' AGL amounted to a compensable taking. With respect to the regulatory taking claim, the Federal Circuit found that airspace is highly regulated and that the Taylors should have reasonably anticipated that the FAA might not issue a "No Hazard" designation.[34] The Court also found that the alleged actions by the Air Force, suggesting that the FAA would not issue a "No Hazard" designation, was not the type of government action that gives rise to a regulatory taking claim.[35] Instead, the Court explained, dissemination of information is a legitimate agency function, especially in the context of public safety.[36] The Federal Circuit denied the request for remand to amend their complaint[37] and affirmed the lower court on the physical taking claim, finding that the allegations in the complaint could not support an inference of the required frequency.

In the second case, *Richard v. United States*, the Commissioner of Public Lands for New Mexico alleged that a negotiated resolution of DoD concerns with a wind energy developer resulted in a reduction of wind energy turbines on state trust lands and amounted to a regulatory taking without just compensation.[38] The Commissioner also claimed that the Government's appropriation and physical occupation of state airspace below 500 feet AGL constituted a physical taking of state land, preventing construction of wind turbines on such land.[39]

The U.S. also successfully moved to dismiss the *Richard* case. As to the regulatory taking claim, the U.S. argued that the claim was not ripe because the FAA had not issued any final hazard determinations concerning Part 77 notices involving structures on the Commissioner's lands.[40] Similar to the *Taylor* case, the U.S. argued that FAA hazard determinations are advisory only and cannot constitute a regulatory taking. [41] With respect to the physical takings claim, as in *Taylor*, the U.S. argued that the Commissioner failed to allege sufficient facts to establish such a claim, particularly with regard to frequency and substantial interference.[42] The U.S. also argued that the Commissioner's claims were time-barred by the applicable (six-year) statute of limitations[43] because the MTR in question was established as a low-level

route in the 1970s, and had been in continuous use ever since.[44] In support of this position, the U.S. averred that the date of accrual of a taking claim in such a case is based on when the government started using a flight route, *not* when the consequences of such government acts became most painful.[45]

The Commissioner countered the statute of limitations argument by invoking the "accrual suspension rule," which sets the accrual date based on when the plaintiff knew or should have known the claim existed. Further citing this rule, the Commissioner also asserted that the claim did not become substantial enough for a taking until the opportunity to extract economic benefit from the potential wind energy project actually arose.[46] In response, the U.S. explained that while an escalation of flight activity or more substantial (lower or louder) flight activity *may* give rise to a secondary or successive taking claim and restart the limitations period, the Commissioner failed to allege that there had been any material change in flight operations or that the Governmental use of the MTR was somehow unknowable to the Commissioner.

The Court stated that the accrual suspension rule **might apply** in a future case if a plaintiff **properly supported claims** about when the opportunity arose to extract economic benefit from the land using the "newly available technology."

While the Court ultimately dismissed the Commissioner's complaint, it found the Commissioner's accrual suspension rule claim to be "an appealing one."[47] The Court stated that the accrual suspension rule might apply in a future case if a plaintiff properly supported claims about when the opportunity arose to extract economic benefit from the land using the "newly available technology."[48] The *Richard* Court surmised that based on such information, a court could find that governmental flight activity substantially interfered with a plaintiff's right to use the land in an economically beneficial way based on when the plaintiff knew or should have known of the interference.[49]

POTENTIAL IMPACTS AND NEXT STEPS IN THESE TYPES OF TAKING CLAIMS

Applying the accrual suspension rule as contemplated by the *Richard* Court is troubling to the U.S. because it would seem to support special treatment for physical takings claims involving wind energy production and allow claims to lie dormant for years, no matter how long U.S. operations had been in effect. It could also remove the incentive for wind energy developers to work with the DoD to resolve concerns over a project's impacts on military missions and readiness.

If such claims materialized, the U.S. could argue that wind energy production, while relatively new,[50] is merely a type of land use, and the proper consideration of this land use is during valuation, not the determination of the claim's accrual date. Under established case law, courts look to government overflight activity to establish if and when governmental overflight activity was sufficient to constitute an initial taking (e.g. commencement of thousands of annual low-level military aircraft flights over a landowner's land).[51] If it finds a taking has occurred more than six years before the case was filed, the statute of limitations serves to bar that claim.[52] Courts, however, routinely examine whether changes of governmental activity, such as an extension of a runway or a basing decision resulting in more flights generally, more flights at lower elevations, or noisier aircraft[53] constitute an additional, compensable taking within the limitations period.

If a court finds a viable taking claim has occurred during the limitations period, the Court proceeds to valuation – a determination of the difference in value of the property before and after the taking in the limitations period.[54] If a new land use (e.g. residential or wind energy) makes the property more valuable at the time of the additional taking, the court will award compensation to the landowner that reflects the increase of valuation due to new the land use—even if the same area was previously subject to a prior taking outside the limitations period.[55] Thus, there is no

need to change the approach to setting the accrual date for physical taking claims involving potential wind energy production—courts already consider land use types during its valuation analysis.

> If the Court agreed with the Taylors that any flights below 500' AGL constituted a taking, it may have invited a **potential flood of claims**.

As for the *Taylor* case, the Federal Circuit's decision strongly supports the Air Force/DoD's sharing of their analysis of the potential impacts of wind energy projects on flight safety. A contrary ruling may have had a chilling effect on military component reviews of wind energy projects. It is also assuring that the Federal Circuit affirmed the lower court's ruling that the Taylors failed to allege that the flights were frequent enough to state a claim for a navigation easement. If the Court agreed with the Taylors that any flights below 500' AGL constituted a taking, it may have invited a potential flood of claims for any sporadic, infrequent governmental flight activity below 500' AGL, including military flyovers at sporting events, graduations or as a sign of support for health care workers and first responders.

CONCLUSION

Wind energy competes for the same space used by DoD operations, and the construction of wind turbines may interfere with radar systems. The competition is getting fierce and impacts are escalating with cumulative impacts from multiple wind projects threatening to eliminate the viability of some missions and systems. This will worsen with taller turbines soon to hit the market. Thus far, Fifth Amendment lawsuits that threatened to upset the DoD review process of proposed wind energy projects have been unsuccessful. If that were to change, however, the viability of the Clearinghouse could be at risk, increasing the already heightened tension between wind energy projects and military operations and readiness.

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ENDNOTES

[1] *Record U.S. Wind Farm Development Driven by Corporations, Utilities, and State Calls for Offshore Projects*, Renewable Energy Mag., Aug. 1, 2019, https://www.renewableenergymagazine.com/wind/record-us-wind-farm-development-driven-by-20190801.

[2] *Id.*

[3] American Wind Energy Association Fact Sheet, Promoting Our Energy Independence and Our National Security, accessed Sept. 18, 2019, https://www.awea.org/Awea/media/Resources/Fact%20Sheets/AWEA_EnergyIndependence-Security-R.pdf.

[4] *See* DoD Clearinghouse Report, Apr 2016, supra n. 7 at 5-7.

[5] *Id.* at 6. (because of wind projects, "some DoD missions are no longer realistic." Accordingly, there has been "significant alteration of military operations or degrad[ation of] capability development"). A surge in projects since this report has exacerbated this problem.

[6] https://www.ge.com/renewableenergy/wind-energy/offshore-wind/haliade-x-offshore-turbine; *see also* Karl-Erik-Strommsta, *GE Finishes First Nacelle for 12MW Offshore Wind Turbine*, Green Tech Media, Jul. 22, 2019, https://www.greentechmedia.com/articles/read/ge-finishes-first-nacelle-for-12mw-haliade-x-offshore-wind-turbine.

[7] Mitigation agreements between wind energy developers have resulted in: alterations in the location of turbines; modification of government radars (software optimizations and supplementing and relocating radars); and curtailment of radar use for specified periods. *See* DoD Clearinghouse Report, Apr 2016, *supra* n. 7 at 4-7.

[8] Military training route is defined as "a training route developed as part of the Military Training Route program, carried out jointly by the [FAA] and the Secretary of Defense, for use by the armed forces for the purposes of conducting low-altitude, high-speed military training." 10 U.S.C. § 183a(h)(6).

[9] National Defense Authorization Act of Fiscal Year 2018, Pub. L. No. 115-91, 131 Stat. 1283, 1343-48 (codified at 10 U.S.C. § 183a (2018). Originally, Section 358 of the Ike Skelton National Defense Authorization Act for Fiscal Year 2011, Pub. L. No. 111-383, § 358(a), 124 Stat. 4137, 4198-4202 (2011).

[10] 10 U.S.C. §§ 183a(a)-(b).

[11] The FAA process is part of by FAA's responsibility to regulate the safe and efficient use of navigable airspace. 49 U.S.C. § 40103. Specifically, under 14 C.F.R. Part 77 ("Part 77"), FAA evaluates notices concerning proposed structures or improvements that exceed a certain height above the ground level (AGL) to determine whether it would present a hazard to air navigation. 14 C.F.R. § 77.31.

[12] DoD Clearinghouse, Report on Impact of Wind Energy Developments on Military Installations (Apr. 2016) at 3 *accessible at* https://www.acq.osd.mil/dodsc/library/RTC%20Report%20on%20Wind%20Energy%20Impacts%20-%20Letters%20and%20Report%20-%20(USA000910-16).pdf.

[13] *See* 32 C.F.R. § 211.6(a).

[14] 10 U.S.C. § 183a(c)(5); 32 C.F.R. § 211.6(a)(2).

[15] National Defense Authorization Act for Fiscal Year 2020 Pub. L. No. 116-92, § 311, (to be codified as amended at 10 U.S.C. § 183a(c)(1)).

[16] Defined as 'any adverse impact upon military operations or readiness, including flight operations research, development, testing, and evaluation and training, that is demonstrable and is likely to impair or degrade the ability of the armed forces to perform their warfighting missions." *See* 32 C.F.R. § 211.3.

[17] *See* 10 U.S.C. § 183a(c)(2); *see also* 32 C.F.R. §§ 211.3; 211.6(a)(3)(i)-(iii). Potential mitigation options include: modifications to the project (including specific components of the project); modifications of military operations, radars and equipment; potential upgrades to existing military systems or procedures; and the purchase of new systems. *See* 10 U.S.C. §§ 183a(d)(2)(F)(i)-(v); *see also* 32 C.F.R. § 211.9.

[18] 32 C.F.R. § 211.6(a)(3)(iii)(A),(C),(D).

[19] 10 U.S.C. § 183a(c)(3).

[20] 32 C.F.R. § 211.6(b)(1).

[21] Defined as the construction, alteration, establishment, or expansion, or the proposed construction, alteration, establishment, or expansion, of a structure or sanitary landfill that would: (1) endanger safety in air commerce related to the activities of DoD; (2) interfere with the efficient use and preservation of the navigable airspace and of airport traffic capacity at public use airports related to the activities of DoD, and (3) significantly impair or degrade the capability of the DoD to conduct training, research, development, testing, and evaluation, and operations or to maintain military readiness. 32 C.F.R. § 211.3.

[22] The Clearinghouse has only made one "unacceptable risk determination" out of thousands of wind energy projects reviewed. *See* DoD Office of Under Sec'y of Def. for Acquisition, Tech. and Logistics, Report on the Determination of Unacceptable Risk to Nat'l Sec. from a Proposed Commercial Wind Turbine Project in the Vicinity of Naval Air Station Patuxent River and the Atlantic Test Range (Dec. 2014), *accessible at* https://www.acq.osd.mil/dodsc/about/library.html.

[23] If an "unacceptable risk" is found, the Clearinghouse must send its determination to FAA, promptly provide a detailed report to Congress, and notify appropriate state agencies *See* 10 U.S.C. §§ 183a(e)(2)(A)-(B); *see also* C.F.R. §§ 211.6(b)-(c); 211.10.

[24] *See* 10 U.S.C. § 183a(g); *see also* 14 C.F.R. § 77.31; 32 C.F.R. §§ 211.4(c); 211.6(b)(2)(iv).

[25] U.S. Const. Amend. V states "private property [shall not] be taken for public use, without just compensation."

[26] *Taylor v. United States*, 142 Fed. Cl. 464, 468 (Ct. Fed. Cl. 2019).

[27] A regulatory taking occurs where the governmental action is a regulation that unduly burdens a property. *Huntleigh USA Corp. v. United States*, 525 F.3d 1370, 1377-78 (2008). Regulatory takings are sub-divided into two types: categorical and non-categorical. A categorical taking occurs when the regulatory imposition deprives "all commercially viable use" of the property. A non-categorical taking occurs where only some of the uses otherwise available to the property are prohibited or restricted by the regulatory imposition. *Id.* at 1378 n. 2.

[28] *Taylor*, 142 Fed. Cl. at 468.

[29] As opposed to a condemnation action initiated in the Courts by Government, an inverse condemnation claim of a physical taking alleges that governmental activity constitutes a condemnation of a compensable property right. To establish a physical taking due to physical invasion of airspace over one's property, a claimant must establish: (1) the governmental planes flew directly over the claimant's land; (2) the flights were low and frequent; and (3) the flights directly, immediately, and substantially interfered with the claimant's use and enjoyment of the land. *Brown v. United States*, 73 F.3d 1100, 1102 (Fed. Cir. 1996).

[30] *Taylor*, 142 Fed. Cl. at 468.

[31] *Id*. at 471-73.

[32] *Id*.

[33] *Id*. at 471-73.

[34] *Taylor v. United States, No. 2019-1901, 2020 U.S. App. LEXIS 15565 at *10-11 (Fed, Cir. May 15, 2020).*

[35] *Id.* at *11-12.

[36] *Id*.

[37] *Id*. at *14-15. The Taylors sought to leave to amend their complaint in the Court of Federal Claims, which the Court of Federal Claims denied on August 14, 2020.

[38] *Richard v. United States*, No. 18-1225L, 2019 U.S. Claims LEXIS 669 at *7-9 (Jun. 19, 2019).

[39] *Id*.

[40] *Richard*, 2019 U.S. Claims LEXIS 669, at *12-13.

[41] *Id*. at 10, 12-19; *see also Breneman v. United States*, 57 Fed. Cl. 571, 583-85 (2003) ("FAA's hazard determinations simply have no enforceable legal effect. The FAA is not empowered to prohibit or limit proposed construction it deems dangerous to air navigation."); *Flowers Mill Assoc. v. U.S.*, 23 Cl. Ct. 182, 187 (Ct. Cl. 1991) (finding that although the FAA's hazard determination would have "constituted a considerable stumbling block," it cannot be the basis for a Fifth Amendment takings claim); *see also Dimare Fresh, Inc. v. United States*, 808 F.3d 1301, 1308 (Fed. Cir. 2015) (interpreting *Flowers Mills*); *Aircraft Owners and Pilots Ass'n v. FAA,* 600 F.2d 965, 967 (D.C. Cir. 1979) (holding that hazard determinations are advisory in nature).

[42] *Id*. at *28.

[43] *Id*. (citing *A.J. Hodges Indus. Inc. v. United States*, 174 Ct. Cl. 259 (Ct. Cl. 1966).

[44] *Id*. at *28-29.

[45] *Id*. at *30 (citing *Fallini v. United States*, 56 F.3d 1378, 1383 (Fed. Cir. 1995)).

[46] *Id*. at *29-32 (citing *Young v. United States*, 529 F.3d 1380, 1384-85 (Fed. Cir. 2008) (suspension of accrual applies when a plaintiff can demonstrate that either the defendant concealed its acts with the result of plaintiff being unaware of their existence or that the injury was inherently unknowable at the accrual date)).

[47] *Id*. at *31.

[48] *Id*.

[49] *Id*.

[50] The U.S. could also argue that the *Richard* Court only opened the door to claims *if* wind energy technology were only available within the preceding six years. Wind turbine technology is not new—the potential impacts of wind turbines on defense systems and missile warning radars was documented in a report to Congress as early as 2006. Report to Congressional Defense Committees on Effect of Windmills on Military Readiness (2006) accessible at https://www.acq.osd.mil/dodsc/library/Congressional%20Report%20Impact%20of%20Wind%20Turbines%202006%20AFRL.pdf.

[51] *A.J. Hodges Indus. Inc.*, 174 Ct. Cl. at 265-66 (finding taking occurred when the U.S. began to operate B-47s regularly and frequently over plaintiff's property with the intention of continuing such flights indefinitely).

[52] *Id*. at 266; *Mid-States Fats & Oils Corp. v. United States*, 159 Ct. Cl. 301, 309-10 (Ct. Cl. 1962) (taking occurred when regular intrusions by military jet aircraft in lower reaches of airspace over the plaintiff's property and have continued with great frequency).

[53] *Avery v. United States*, 165 Ct. Cl. 357, 359-62 (introduction of larger, heavier, noisier aircraft can constitute a new and additional taking even if the new aircraft do not violate the boundaries of the initial easement).

[54] *A.J. Hodges Indus. Inc.*, 174 Ct. Cl. at 267-68; *Mid-States Fats & Oils Corp*., 159 Ct. Cl. at 310.

[55] In *A.J. Hodges*, a portion of the claimant's property was eligible residential development before the additional taking and the remaining portion was valued based on the existing use, which was agricultural. The Court awarded damages for the difference between residential and agricultural use for the acreage that was eligible for residential development. *Id.* at 271, 283.