

United States Court of Appeals
FOR THE DISTRICT OF COLUMBIA CIRCUIT

Argued October 8, 2013

Decided January 22, 2014

No. 12-1362

TOWN OF BARNSTABLE, MASSACHUSETTS,
PETITIONER

v.

FEDERAL AVIATION ADMINISTRATION,
RESPONDENT

CAPE WIND ASSOCIATES, LLC,
INTERVENOR

Consolidated with 12-1363

On Petitions for Review of Final Agency Action
of the United States Federal Aviation Administration

W. Eric Pilsk argued the cause for petitioners. With him on the briefs were *Charles C. Lemley* and *Catherine M. van Heuven*.

Daniel J. Lenerz, Attorney, U.S. Department of Justice, argued the cause for respondent. With him on the brief were *Stuart F. Delery*, Principal Deputy Assistant Attorney General, *Michael J. Singer*, Attorney, *Richard H. Saltsman*, Assistant Chief Counsel for Litigation, Federal Aviation Administration,

and Vicki Leemon, Manager, Adjudication Branch.

Christopher H. Marraro argued the cause for intervenor Cape Wind Associates, LLC. With him on the brief was *Geraldine E. Edens*.

Before: GARLAND, *Chief Judge*, and ROGERS and BROWN, *Circuit Judges*.

Opinion for the Court by *Circuit Judge* ROGERS.

ROGERS, *Circuit Judge*: This case arises in the context of the approval of a lease by the U.S. Department of Interior to Cape Wind Associates for construction of an offshore wind farm in Nantucket Sound. Under the lease, Cape Wind must obtain the Federal Aviation Administration's ("FAA") determination whether the turbines pose a hazard to air navigation and comply with any mitigation measures before beginning construction. In *Town of Barnstable, Mass. v. FAA*, 659 F.3d 28 (D.C. Cir. 2011) ("*Barnstable I*"), the court held that the "no hazard" determinations in 2010 for each of the wind turbines in a 25-square mile area of Nantucket Sound were "inadequately justified." *Id.* at 31. Petitioners now challenge the no hazard determinations in 2012 as similarly deficient for failing to analyze the safety risks posed by the project and to perform an environmental review required by the National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4332. For the following reasons, we deny the petitions for review.

I.

Regarding structures interfering with air commerce, Congress has instructed that:

Under regulations prescribed by the Secretary [of

Transportation], if the Secretary decides that constructing . . . a structure may result in an obstruction of the navigable airspace or an interference with air navigation facilities and equipment or the navigable airspace, the Secretary shall conduct an aeronautical study to decide the extent of any adverse impact on the safe and efficient use of the airspace, facilities, and equipment.

49 U.S.C. § 44718(b)(1). In conducting the study, the Secretary is to “consider factors relevant to the efficient and effective use of the navigable airspace,” including “the impact on arrival, departure, and en route procedures for aircraft operating under visual flight rules [VFR],” “the impact on [such procedures] for aircraft operation under instrument flight rules [IFR],” and “the cumulative impact resulting from the proposed construction . . . when combined with the impact of other existing or proposed structures.” *Id.* § 44718(b)(1)(A), (B) & (E).

The Secretary’s regulations provide the standards to be used to determine whether a structure would constitute an “obstruction[] to air navigation,” 14 C.F.R. § 77.13, and define an “obstruction” in terms of height and location. *Id.* § 77.17. As relevant, a structure within three nautical miles of an airport constitutes an obstruction if it is more than 200 feet above ground level, *id.* § 77.17(a)(2), but regardless of its location a structure higher than 499 feet above ground level will constitute an obstruction. *Id.* § 77.17(a)(1). The FAA is directed to issue a Determination of No Hazard to Air Navigation “when the aeronautical study concludes that the proposed construction . . . will exceed an obstruction standard but would not have a substantial aeronautical impact to air navigation,” *id.* § 77.31(d), or when “a proposed structure does not exceed any of the obstruction standards and would not be a hazard to air navigation.” *Id.* § 77.31(e). The FAA’s aeronautical studies are

conducted according to the FAA Handbook, *Procedures for Handling Airspace Matters*, FAA Order JO 7400.2J (February 9, 2012), of which Section 3, on identifying and evaluating aeronautical effect, is relevant here.

In 2009, the FAA determined that the proposed turbines, which are to be located in the middle of Nantucket Sound, would have an electromagnetic effect on local radar facilities — namely the ASR-8 radar at Otis Airfield in Falmouth, Massachusetts — and conducted a year-long aeronautical study of the effects of the project on the operation of navigation facilities and the safe and efficient use of the navigable airspace. Based on the study, the FAA issued no hazard determinations, finding that each of the turbines would not be a hazard to air navigation provided (1) a digital processor—the TDX-2000—was installed at the ASR-8 radar at Otis Airfield, (2) Cape Wind provided financial assurance for the installation of an additional radar upgrade if the TDX-2000 insufficiently mitigated any radar interference, and (3) the turbines were properly lighted and marked. Applying Handbook § 6-3-8(c)(1), the FAA concluded that the turbines would not have an adverse effect on aircraft operating under VFR, when pilots navigate by reference to physical landmarks, because the turbines would be less than 500 feet high and located in the area of “en route” operations (*i.e.*, not affecting takeoffs or landings). Petitioners sought review.

In *Barnstable I*, 659 F.3d at 34–35, this court held that the FAA had misread its regulations by relying solely on § 6-3-8(c)(1) of the Handbook to find no adverse effect on VFR operations because the turbines would not exceed 500 feet in height. The FAA had not addressed whether the turbines would have an “adverse effect” under § 6-3-3. *Id.* at 35. Section 6-3-3 states that “[a] structure is considered to have an adverse effect if it first . . . is found to have physical or electromagnetic

radiation effect on the operation of air navigation facilities.” If so, then an “adverse effect,” as relevant, exists where a structure would require a change to an IFR minimum flight altitude or to a VFR operation’s regular flight course or altitude, or affect future VFR or IFR operations. Handbook § 6-3-3 (a), (b), (e). The court found no “apparent analysis of the record evidence concerning the wind farm’s potentially adverse effects on VFR operations,” *Barnstable I*, 659 F.3d at 35, although at the time it was “undisputed” that the turbines would have “physical or electromagnetic radiation effect on the operation of air navigation facilities,” *id.* The court therefore vacated the 2010 no hazard determinations and remanded the matter. *Id.* at 36.

By the time the FAA issued no hazard determinations on August 15, 2012, the circumstances with regard to radar had changed. In January 2012, the FAA upgraded the ASR-8 radar and beacon at Otis Airfield by digitizing the output with a TDX-2000 processor. The FAA had concluded in the aeronautical study that the installation of the TDX-2000 would not only address existing radar issues with “coasting, dropped targets, and ring around,” but also reduce unwanted returns from the wind turbines. 2012 Determination at 5. In a study conducted before the TDX-2000 was permanently installed, the FAA ran tests simulating wind turbines on the ASR-8 radar at Otis Airfield with and without a TDX-2000 and confirmed that the modification was effective. The FAA further evaluated the actual operation of the TDX-2000 at Otis Airfield after its permanent installation in 2012. *See Resp’t Br.* at 13.

On remand, the FAA explained that its aeronautical study had relied on multiple reports to evaluate potential impacts to the three FAA radar sites on or near Nantucket Sound. The FAA found that the Cape Wind project would have no noticeable impact on beacon, or “secondary,” radars. All three radar sites (at North Truro Cape, Nantucket, and Falmouth) are

more than 2.4 nautical miles from the proposed turbines, a distance at which a 2008 study near a wind farm in Great Falls, Montana, found that turbines generated no false target reports. 2012 Determination at 4 & n.2 (citing Guidelines for Evaluating Wind Turbine Impacts to Radars (Dec. 2010) (“2010 Guidelines”)).

As to search, or “primary,” radar, the FAA found the turbines would not affect the service at the North Truro Cape site, which is used for long-range coverage, because it was located 31.66 nautical miles from the project. Because of the distance from the radar to the project and the “minimal” elevation angle of the proposed turbines, the FAA found that the low-altitude coverage of the North Truro radar would be unaffected. *Id.* at 4. The Departments of Homeland Security and Defense, which rely on this radar for national defense and drug interdiction, also evaluated the project and identified no impacts. Although acknowledging that the wind turbines could decrease the probability of detection at the Nantucket search radar as a result of wind turbine “clutter,” the FAA Operations Engineering Support Group had determined that this level of impact would not rise to the level of a “physical or electromagnetic effect” on the air navigation facility because the probability of detection is not expected to drop “below acceptable values,” in part because the ASR-9 sites have been upgraded with the installation of a 9PAC-II dynamic sensor that significantly reduces “clutter.” *Id.* at 5. The FAA also concluded that while search radar at Otis Airfield might be affected by the “shadowing” of aircraft flying behind turbines at lower than 800 feet and within three nautical miles of the wind farm, any such effect would be “brief and intermittent” due to the spacing between the turbines and their individual width. *Id.*

In evaluating the likely effect of the turbines on VFR operations, the FAA applied the criteria in Handbook § 6-3-

8(c)(1). That subsection states as to “en route operations” that “[a] structure would have an adverse effect upon VFR air navigation if its height is greater than 500 feet above the surface at the site, and within 2 statute miles of any regularly used VFR route.” Although the wind farm would be within the two-mile distance, the height for the proposed turbines is not greater than 500 feet above the surface at their sites. The FAA noted that its adverse effects determinations were based on “long-standing FAA policy governing aeronautical studies of proposed structures and their potential impact on VFR operations.” 2012 Determination at 6. “Therefore, even if the proposed wind turbines exceeded an obstruction standard in 14 CFR § 77.17, they would not adversely affect VFR operations.” *Id.* The FAA also found no adverse effect on “any existing or proposed arrival or departure VFR operations or procedures.” *Id.*

Although the FAA therefore concluded that under its policy “no VFR analysis is required in this case,” the FAA collected data on VFR traffic in the area “to address concerns raised by the court in [*Barnstable I*].” *Id.* The FAA hired the MITRE Corporation to assess the project’s effects on VFR flights. The MITRE study found that between January 1 and September 30, 2011, 427 VFR flights equipped with transponders flew over the location of the proposed turbines at 949 feet or below, flights that presumably would have had to change altitude or route had the wind farm been in existence, *see* 14 C.F.R. § 91.119(a),(c). Of those flights, more than half (220) passed over the proposed location of the four turbines in the southeast corner of the wind farm. On any given day during the nine-month period, the greatest number of transponder-equipped VFR flights that passed over the turbines’ proposed location at an altitude of 949 feet or below was nine, which occurred three times. As the FAA notes, more often, on 165 of 273 days, no flights or one flight passed over that location at or below 950 feet. *See* Resp’t Br. at 11–12.

Because the FAA cannot track VFR aircraft that lack an operating transponder, *see* 2012 Determination at 6 n.10, the FAA also issued a public notice of the wind farm proposal on February 10, 2012 “to all known aviation interests and to non-aeronautical interests that may be affected by the proposed turbines,” *id.* at 4 (citing Handbook § 6-3-17(a)(1)), and sought information regarding the turbines’ potential impact on this type of VFR operations. Of the public comments received, “supporting commenters stated that the turbines would not have a significant adverse effect on VFR flight in the area,” and “that any adjustments to flight paths or altitudes would be minor and brief,” with which the FAA agreed. *Id.* at 7. In response to the nine commenters objecting to the project because of its impact on the navigable airspace and radar, the FAA explained why it found none persuasive. For example, the FAA explained that the project would not compromise safety during marginal weather periods because the turbines would be marked and lighted to make them conspicuous and pilots could safely fly around them. Further, the FAA stated: “This is not unusual and does not of itself create a safety risk,” observing that some commenters indicated “aircraft currently make course and altitude adjustments in this area to avoid passenger ferries and other marine traffic.” *Id.* at 9. The FAA additionally explained that VFR operations would not be “compressed” into IFR corridors, which begin at 2,000 feet and higher, because VFR flights may operate as low as 940 feet over the turbines, permitting “adequate airspace for VFR and IFR aircraft operating in this area.” *Id.* at 8. The FAA noted as well that “[a] mixture of IFR and VFR operations is not unique to Nantucket Sound and is common in areas with major commercial airports and numerous general aviation airports,” and that “[a]dherence to [14 C.F.R.] § 91.119 provides basic separation between . . . operations, regardless of whether the pilot is familiar with local customs, because all pilots are operating under the same requirements.” *Id.*

Having found that the turbines, individually and as a group, would neither exceed the obstruction standards in 14 C.F.R. § 77.17 nor have a physical or electromagnetic radiation effect on the operation of air navigation facilities, *see* Handbook § 6-3-3, the FAA concluded, in the absence of either condition, that no further “adverse effect” evaluation was required. The FAA also found the turbines would not create a safety risk for local pilots because they would be properly lighted and marked. In issuing the 2012 no hazard determinations because the proposed wind farm would not have a substantial adverse effect and would not be a hazard to air navigation, the FAA included several conditions, one of which required Cape Wind to place \$15 million in escrow for two years to acquire and install an ASR-11 radar system if the TDX-2000 upgrade at Otis Airfield proved insufficiently effective. Petitioners again sought review.

II.

Petitioners contend that on remand the FAA again relied on its erroneous view that a structure can only be a hazard if it is an “obstruction,” notwithstanding its adverse effect on the operation of air navigation facilities by interfering with the operation of FAA radar facilities or its effect on VFR flights, and failed to conduct the safety analysis mandated by the court in *Barnstable I*. To successfully challenge the 2012 no hazard determinations, petitioners must demonstrate that the FAA’s action was “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A); *see, e.g., Clark Cnty., Nev. v. FAA*, 522 F.3d 437, 441 (D.C. Cir. 2008). An agency’s interpretation of its regulations is “controlling unless plainly erroneous or inconsistent with the regulation.” *Auer v. Robbins*, 519 U.S. 452, 461 (1997) (citation and internal quotation marks omitted). And the FAA’s factual findings, if supported by substantial evidence in the record as a whole, are “conclusive.” 49 U.S.C. § 46110(c). The substantial evidence

standard “requires more than a scintilla, but can be satisfied by something less than a preponderance of the evidence.” *Fla. Gas Transmission Co. v. FERC*, 604 F.3d 636, 645 (D.C. Cir. 2010) (citation omitted). The court, however, must consider the evidence in light of “whatever in the record fairly detracts from its weight.” *Universal Camera Corp. v. NLRB*, 340 U.S. 474, 488 (1951).

A.

Petitioners contend that the 2012 no hazard determinations are inconsistent with the Handbook procedures and 49 U.S.C. § 44718. We conclude that the FAA could reasonably view its Handbook procedures implementing the Secretary’s regulations to establish a threshold finding necessary to trigger a further “adverse effects” analysis. *Cf. Auer*, 519 U.S. at 461. The Handbook provision for “Determining Adverse Effect” reads: “A structure is considered to have an adverse effect if it *first* exceeds the obstruction standards of part 77, and/or is found to have physical or electromagnetic radiation effect on the operation of air navigation facilities.” Handbook § 6-3-3 (emphasis added). By using the word “first” the FAA signaled, as a matter of the ordinary usage of the word, *cf. Engine Mfrs. Ass’n v. S. Coast Air Quality Mgmt. Dist.*, 541 U.S. 246, 252 (2004), that a finding of either an obstruction or an air navigation effect is antecedent to the remaining analysis of adverse effects under the Handbook. *See* MERRIAM-WEBSTER’S COLLEGIATE DICTIONARY 439 (10th ed. 1993). Indeed, the FAA has revised the sentence to state explicitly that “[i]f a structure first exceeds the obstruction standards of Part 77, and/or is found to have a [radar effect], then the proposed or existing structure . . . has an adverse effect if it would [have other effects listed in ¶ 6-3-3 (a)-(f)].” *Guidance on Determining Adverse Effect*, FAA Notice N JO 7400.29 (June 19, 2012). This further clarifies the FAA’s intended meaning. In any event, when read as a whole, the plain text of § 6-3-3 indicates that VFR impact is one category of effects to be

considered once either of the two threshold conditions is found. *See* § 6-3-3(b).

Reading § 6-3-3 in the context of the Handbook provisions on the identification and evaluation of aeronautical effect confirms that the FAA’s interpretation is reasonable. Section 7-1-3(e) states that the FAA will issue a hazard determination if a structure would have a “substantial adverse effect” that cannot be eliminated. Section 6-3-5 states that a “substantial adverse effect” exists when a structure “causes electromagnetic interference . . . or if there is a combination of: a. Adverse effect as described in paragraph 6-3-3; and b. A significant volume of aeronautical operations . . . would be affected.” Therefore, if a structure does not cause electromagnetic interference under § 6-3-5, then § 6-3-3 prescribes the process for determining adverse effect. When neither of the threshold conditions in § 6-3-3 exists, the FAA has determined that it need not analyze whether a “significant volume” of VFR flights would be required to change their course or altitude, *see* § 6-3-3(b) and § 6-3-4. In *Barnstable I*, 659 F.3d at 35 n.1, the court assumed this interpretation was permissible, and petitioners present no cause for a different conclusion. The FAA likewise does not need to evaluate VFR effects under § 6-3-8 when neither of the two § 6-3-3 threshold criteria is satisfied.

Neither the governing statute on which petitioners rely nor the Secretary’s regulations render a threshold requirement impermissible. Congress specified the factors that must be considered in an aeronautical study, *see* 49 U.S.C. § 44718(b)(1)(A)-(E), but left to the Secretary’s broad discretion the determination of when a structure may result in an obstruction of navigable airspace and what constitutes an adverse impact. Section 44718 does not use the term “hazard,” much less set the requirements for determining when a structure is a “hazard.” To the extent petitioners maintain that the FAA’s “threshold” interpretation of § 6-3-3 of the Handbook violates 49

U.S.C. § 44718, by failing to “decide the extent of any adverse impact on the safe and efficient use of the airspace, facilities, or equipment,” Petrs’ Br. 37, they ignore the statutory scheme Congress created and the deference this court owes to the reasonable interpretation of the FAA, acting for the Secretary, in implementing the statute. *See Chevron U.S.A. Inc. v. Natural Resources Def. Council*, 467 U.S. 837, 843–44 (1984); *see, e.g., Public Citizen, Inc. v. FAA*, 988 F.2d 186, 191 (D.C. Cir. 1993). When the FAA found in 2009 that the proposed turbines “may result in an obstruction of the navigable airspace or an interference with air navigation facilities and equipment or the navigable airspace,” 49 U.S.C. § 44718(b)(1), it conducted an aeronautical study and proceeded to “decide” and “disclose” the extent of any adverse impact. That is what Congress required, leaving further elaboration on standards for regulations to be issued in light of the Secretary’s expertise and judgment. *Cf. Aircraft Owners & Pilots Ass’n v. FAA*, 600 F.2d 965, 973–74 (D.C. Cir. 1979). The statute’s reference to “any adverse impact,” while “all inclusive,” Petrs’ Br. 37, does not limit the Secretary’s discretion to reasonably determine what can constitute an adverse impact or how those impacts should be evaluated.

Petitioners’ assertion that the statute proscribes the FAA’s decision to impose a backup plan for the TDX-2000 also finds no statutory support. *Air Line Pilots’ Ass’n Int’l v. FAA*, 446 F.2d 236, 241–42 (5th Cir. 1971), on which they rely, confirms that the regulatory purpose of the safety provisions administered by the FAA contemplates pre-construction evaluation of modification of operating procedures, but that opinion is addressing the ripeness of the FAA’s determination for judicial review, not the required substance of a determination.

Neither do petitioners demonstrate that the FAA’s threshold interpretation of § 6-3-3 is arbitrary and capricious because it accounts for potential VFR effects only when either an

obstruction or radar interference is present. VFR flights do not rely on instruments or instructions from air traffic control to navigate; rather, the FAA explained, “[i]t is the pilot’s responsibility to see and avoid other aircraft and structures when conducting VFR flight.” 2012 Determination at 8. The FAA could reasonably conclude, at least in the circumstances here, that when proposed construction will not compromise radar operations, then changes to VFR flight paths will not be hazardous because air traffic control will be able to track VFR and IFR flights on radar and direct IFR flights away from other flights or the wind turbines.

Petitioners’ suggestion that in *Barnstable I* the court mandated a “safety analysis” ignores the changed circumstances after 2010 and the FAA’s further evaluation in light of the court’s concerns. When there is neither an obstruction nor radar interference, as the FAA found in 2012, the FAA interprets its Handbook not to require the remaining “adverse effect” analysis under § 6-3-3, which in turn renders the analysis under § 6-3-8 inapplicable. In *Barnstable I*, the court stated the FAA needed to perform additional analysis because the adverse effect on radar was at that time “undisputed,” 659 F.3d at 35. Notwithstanding the changed radar circumstances in 2012 and its longstanding policy reflected in its Handbook, the FAA on remand addressed the court’s concern in *Barnstable I* by hiring the MITRE Corporation to do a further study, which found that most VFR flights would be over just four turbines in one corner of the wind farm, and by seeking public comments and responding to aeronautical objections to the wind farm.

B.

Petitioners’ challenge to the FAA’s factual findings regarding radar and mitigation for interference with the Otis ASR-8 as lacking substantial evidentiary support fare no better. They suggest that the TDX-2000 may not mitigate the known adverse effects of the turbines and that an ASR-11 also may not

resolve the acknowledged interference issues. They also maintain that the FAA failed to fully analyze other adverse effects, specifically the “shadowing” effects on beacon and search radar, the decreased probability of detection for search radars, impacts to the Truro ARSR-4, and unique weather conditions in Nantucket Sound. And they maintain the FAA failed to impose mitigation measures it had identified as necessary.

Multiple studies of record analyzing the anticipated impact of wind turbines on the radar systems in Nantucket Sound and on radar in general support the FAA’s findings that the wind turbines will neither “have physical or electromagnetic radiation effect on,” Handbook § 6-3-3, nor “cause[] electromagnetic interference to,” Handbook § 6-3-5, air navigation. These studies — which include the Technical Operations Division Response, the 2009 Impact Study of 130 Offshore Wind Turbines in Nantucket Sound (“Impact Study”), and the 2010 Surveillance Engineering Study — address the potential safety concerns such as unwanted search radar returns (“clutter”) and drops of targets. The Technical Operations Division Response found that impacts of the wind turbines to radars other than Otis Airfield were unlikely and that the TDX-2000 would “significantly improve[]” the Otis Airfield radar performance. The Impact Study acknowledged the vulnerability of the older Otis Airfield radar and recommended a TDX-2000 to ameliorate the problem, stating that TDX-2000s “are known to perform well with the ASR-8” and have “many post processing tools and features that are designed for operating in a high clutter environment.” Impact Study at 24–25. Although at the time the TDX-2000 had not been tested near a wind farm, the study concluded that it would “greatly enhance the radar product.” *Id.* at 25. For the Surveillance Engineering Study, the FAA temporarily installed a TDX-2000 at Otis Airfield and tested its performance with simulated wind turbines. The TDX-2000 was found to have “exceeded expectations” for search radar

probability of detection. Surveillance Engineering Study at 16.

Other FAA documents of record also indicate that the ASR-11's performance would be satisfactory. The FAA's 2010 Guidelines on the technical operations process for evaluating effects of wind turbines on radar state that turbine effects require detailed study only if they are less than 6.5 nautical miles from the radar, *see* 2010 Guidelines at 5, and here the nearest radar is 9.5 miles away. Additionally, the FAA pointed out in responding to concerns of an FAA air traffic control specialist about a proposed mitigation plan for radar interference, particularly with respect to the ASR-8 at Otis Airfield, that the TDX-2000 is "performing as expected, with a reduction in false and dropped targets," that "the enhancement of a TDX-2000 has been performed at approximately 25% of the ASR-8 sites, with documented improvements to clutter and false targets," and that Technical Operations and Air Traffic personnel have "acknowledged improvements in overall radar performance." Response of Douglas A. Klauck, FAA, (July 9, 2012) to Affidavit of Mark J. Cool, Air Traffic Control Specialist (July 2, 2012).

There also was evidence regarding the faulty performance of a TDX-2000/ASR-8 combination and an ASR-11 over a wind farm in Travis Air Force Base in California. In opposing the project, two concerned citizens "with extensive radar experience" submitted a 2008 presentation indicating that neither a TDX-2000 nor an ASR-11 had worked near the Travis Air Force Base wind turbines and that the base eventually warned search radar-only aircraft that they were invisible to radar over the turbines. They also stated that restricting flights without transponders over Nantucket Sound would necessitate substantial rerouting because the Sound has many small and recreational aircraft. But neither the commenters nor petitioners offered details about the Travis wind farm to indicate it is comparable in size or geography to the proposed wind farm in Nantucket

Sound. By contrast, the FAA's February 2010 engineering study tested the Otis ASR-8 and the TDX-2000 to predict the effects of the proposed wind farm at its future location in Nantucket Sound. The FAA's Guidelines noted that the TDX-2000 at Travis had "good results." 2010 Guidelines at 10.

To the extent petitioners cite concerns about impacts to other radars, radar "shadowing," and the unique weather conditions of Nantucket Sound, the FAA addressed many of these matters in the Impact Study and found these impacts, if any, would be at acceptable levels. The FAA's findings with regard to the ARSR-4 at Truro are buttressed by the lack of objections from the Departments of Defense and Homeland Security that rely on the radar. The FAA was "not required to address every argument advanced by petitioners," only, as it has done, to "state the main reasons for its decision and indicate that it has considered the most important objections." *Simpson v. Young*, 854 F.2d 1429, 1434–35 (D.C. Cir. 1988). Given the record evidence and the level of FAA expertise involved in drawing factual conclusions from the reports, conducting the aeronautical study, and responding to comments, petitioners fail to show that the FAA findings are unsupported by substantial evidence. See *Aircraft Owners & Pilots' Ass'n*, 600 F.2d at 973–74.

C.

Finally, petitioners' contention that the FAA was required under NEPA, 42 U.S.C. § 4332, to perform or participate in an analysis of the environmental impacts of its no hazard determinations is based on a flawed premise.

Preliminarily, we note that intervenor Cape Wind Associates' challenges to petitioners' standing to raise the NEPA objection are unpersuasive. Given the location of the Town of Barnstable, its standing might well appear self-evident in view of its concerns the wind farm would adversely affect noise or traffic, or degrade views or coastal areas. *Sierra Club v. EPA*,

292 F.3d 895, 900 (D.C. Cir. 2002); see *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560–61 (1992); *Ass’n of Data Processing Serv. Orgs., Inc. v. Camp*, 397 U.S. 150, 153 (1970); see also *Ry. Labor Execs. Ass’n v. U.S.*, 987 F.2d 806, 810 (D.C. Cir. 1993). To the extent the FAA challenged the causation and redressability prongs of the standing analysis in *Barnstable I*, this court held that petitioners had standing. 659 F.3d at 31. Were there any doubt now, petitioners’ supplemental declarations establish that they have standing to raise this NEPA claim. See, e.g., *Cmtys. Against Runway Expansion, Inc. v. FAA*, 355 F.3d 678, 685 (D.C. Cir. 2004); see also *Am. Library Ass’n v. FCC*, 401 F.3d 489, 494 (D.C. Cir. 2005). Neither is the court’s jurisdiction defeated because, as Cape Wind suggests, petitioners have impermissibly split their NEPA claim, which is pending in the district court, since any challenge to the no hazard determinations must be brought in the court of appeals. 49 U.S.C. § 46110(a); see *U.S. Indus., Inc. v. Blake Constr. Co., Inc.*, 765 F.2d 195, 205 n.21 (D.C. Cir. 1985).

No hazard determinations generally do not require preparation of an environmental impact statement because they are not legally binding. See *BFI Waste Sys. of N. Am., Inc. v. FAA*, 293 F.3d 527, 530 (D.C. Cir. 2002). The fact that the Interior Department has required Cape Wind to obtain the FAA’s hazard determination and comply with any mitigation measures it imposes before beginning construction does not create an exception. The FAA has no authority to countermand Interior’s approval of the project or to require changes to the project in response to environmental concerns. Cf. *Dep’t of Transp. v. Pub. Citizen*, 541 U.S. 752, 770 (2004). Although in *Barnstable I* this court supposed, when addressing petitioners’ standing, “that the Interior Department would rethink the project if faced with an FAA determination that the project posed an unmitigable hazard,” 659 F.3d at 34, the court did not suggest that the FAA could unilaterally alter the project or that Interior would alter its decision in response to environmental, as distinct from aviation,

concerns expressed by the FAA. “[W]here an agency has no ability to prevent a certain effect due to its limited statutory authority over the relevant actions, the agency cannot be considered a legally relevant ‘cause’ of the effect.” *Pub. Citizen*, 541 U.S. at 770. Because the FAA “simply lacks the power to act on whatever information might be contained in the [environmental impact statement (“EIS”)],” *id.* at 768, NEPA does not apply to its no hazard determinations.

NEPA’s “rule of reason” does not require the FAA to prepare an EIS when it would “serve no purpose.” *Id.* at 767 (citation and internal quotation marks omitted). The Interior Department prepared an EIS on the wind farm project and stated that it would assess whether additional mitigation measures included in the FAA determination merited a supplemental EIS. There is no need for FAA to duplicate Interior’s NEPA analysis, which has been challenged in another proceeding. *New York v. Nuclear Regulatory Commission*, 681 F.3d 471 (D.C. Cir. 2012), on which petitioners rely, is not on point. The court held there that the agency rulemaking on the safety of nuclear waste storage was subject to NEPA even though the Commission did not license any storage because the rule and its findings would “enable licensing decisions” and “render[] uncontestable general conclusions about the environmental effects of plant licensure” that would apply in later decisions. *Id.* at 477. By contrast, the FAA’s no hazard determinations were not a preliminary stage of decisionmaking that enabled Interior’s lease to Cape Wind Associates; rather, the lease was the product of a distinct decisionmaking process by a different agency prior to FAA’s final determinations. Nor do the FAA’s determinations “render[]” any conclusions about the environmental impacts of the wind turbine project “uncontestable.” Petitioners can and have challenged the sufficiency of Interior’s EIS for the wind farm project, including Interior’s decision not to supplement the EIS in response to FAA’s determinations and mitigation requirements. *See Town of Barnstable First Am. Compl.* ¶¶

179–94 in *Public Employees for Environmental Responsibility v. Bromwich*, No. 1:10-cv-01067 (D.D.C. Sept. 14, 2011).

Accordingly, for these reasons, we deny the petitions for review.