# CALVERT CLIFFS' COORD. COM. v. United States AE Com'n, 449 F. 2d 1109 - Court of Appeals, Dist. of Columbia Circuit 1971

449 F.2d 1109 (1971)

Before WRIGHT, TAMM and ROBINSON, Circuit Judges.

J. SKELLY WRIGHT, Circuit Judge:

These cases are only the beginning of what promises to become a flood of new litigation — litigation seeking judicial assistance in protecting our natural environment. Several recently enacted statutes attest to the commitment of the Government to control, at long last, the destructive engine of material "progress."[1] But it remains to be seen whether the promise of this legislation will become a reality. Therein lies the judicial role. In these cases, we must for the first time interpret the broadest and perhaps most important of the recent statutes: the National Environmental Policy Act of 1969 (NEPA).[2] We must assess claims that one of the agencies charged with its administration has failed to live up to the congressional mandate. Our duty, in short, is to see that important legislative purposes, heralded in the halls of Congress, are not lost or misdirected in the vast hallways of the federal bureaucracy.

NEPA, like so much other reform legislation of the last 40 years, is cast in terms of a general mandate and broad delegation of authority to new and old administrative agencies. It takes the major step of requiring all federal agencies to consider values of environmental preservation in their spheres of activity, and it prescribes certain procedural measures to ensure that those values are in fact fully respected. Petitioners argue that rules recently adopted by the Atomic Energy Commission to govern consideration of environmental matters 1112\*1112 fail to satisfy the rigor demanded by NEPA. The Commission, on the other hand, contends that the vagueness of the NEPA mandate and delegation leaves much room for discretion and that the rules challenged by petitioners fall well within the broad scope of the Act. We find the policies embodied in NEPA to be a good deal clearer and more demanding than does the Commission. We conclude that the Commission's procedural rules do not comply with the congressional policy. Hence we remand these cases for further rule making.

I

We begin our analysis with an examination of NEPA's structure and approach and of the Atomic Energy Commission rules which are said to conflict with the requirements of the Act. The relevant portion of NEPA is Title I, consisting of five sections.[3] Section 101 sets forth the Act's basic substantive policy: that the federal government "use all practicable means and measures" to protect environmental values. Congress did not establish environmental protection as an exclusive goal; rather, it desired a reordering of priorities, so that environmental costs and benefits will assume their proper place along with other considerations. In Section 101(b), imposing an explicit duty on federal officials, the Act provides that "it is the continuing responsibility of the Federal Government to use all practicable means, consistent with other essential considerations of national policy," to avoid environmental degradation, preserve "historic, cultural, and natural" resources, and promote "the widest range of beneficial uses of the environment without \* \* \* undesirable and unintended consequences."

Thus the general substantive policy of the Act is a flexible one. It leaves room for a responsible exercise of discretion and may not require particular substantive results in particular problematic instances. However, the Act also contains very important "procedural" provisions — provisions which are designed to see that all federal agencies do in fact exercise the substantive discretion given them. These provisions are not highly flexible. Indeed, they establish a strict standard of compliance.

NEPA, first of all, makes environmental protection a part of the mandate of every federal agency and department. The Atomic Energy Commission, for example, had continually asserted, prior to NEPA, that it had no statutory authority to concern itself with the adverse environmental effects of its actions.[4] Now, however, its hands are no longer tied. It is not only permitted, but compelled, to take environmental values into account. Perhaps the greatest importance of NEPA is to require the Atomic Energy Commission and other agencies to consider environmental issues just as they consider other matters within their mandates. This compulsion is most plainly stated in Section 102. There, "Congress authorizes and directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this Act \* \* \*." Congress also "authorizes and directs" that "(2) all agencies of the Federal Government shall" follow certain rigorous procedures in considering environmental values.[5] Senator Jackson, 1113\*1113 NEPA's principal sponsor, stated that "[n]o agency will [now] be able to maintain that it has no mandate or no requirement to consider the environmental consequences of its actions."[6] He characterized the requirements of Section 102 as "action-forcing" and stated that "[o]therwise, these lofty declarations [in Section 101] are nothing more than that."[7]

The sort of consideration of environmental values which NEPA compels is clarified in Section 102(2) (A) and (B). In general, all agencies must use a "systematic, interdisciplinary approach" to environmental planning and evaluation "in decisionmaking which may have an impact on man's environment." In order to include all possible environmental factors in the decisional equation, agencies must "identify and develop methods and procedures \* \* \* which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations."[8] "Environmental amenities" will often be in conflict with "economic and technical considerations." To "consider" the former "along with" the latter must involve a balancing process. In some instances environmental costs may outweigh economic and technical benefits and in other instances they may not. But NEPA mandates a rather finely tuned and "systematic" balancing analysis in each instance.[9]

1114\*1114 To ensure that the balancing analysis is carried out and given full effect, Section 102(2) (C) requires that responsible officials of all agencies prepare a "detailed statement" covering the impact of particular actions on the environment, the environmental costs which might be avoided, and alternative measures which might alter the cost-benefit equation. The apparent purpose of the "detailed statement" is to aid in the agencies' own decision making process and to advise other interested agencies and the public of the environmental consequences of planned federal action. Beyond the "detailed statement," Section 102(2) (D) requires all agencies specifically to "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." This requirement, like the "detailed statement" requirement, seeks to ensure that each agency decision maker has before him and takes into proper account all possible approaches to a particular project (including total abandonment of the project) which would alter the environmental impact and the cost-benefit balance. Only in that fashion is it likely that the most intelligent, optimally beneficial decision will ultimately be made. Moreover, by compelling a formal "detailed statement" and a description of alternatives, NEPA provides evidence that the mandated decision making process has in fact taken place and, most importantly, allows those removed from the initial process to evaluate and balance the factors on their own.

Of course, all of these Section 102 duties are qualified by the phrase "to the fullest extent possible." We must stress as forcefully as possible that this language does not provide an escape hatch for footdragging agencies; it does not make NEPA's procedural requirements somehow "discretionary." Congress did not intend the Act to be such a paper tiger. Indeed, the requirement of environmental consideration "to the fullest extent possible" sets a high standard for the agencies, a standard which must be rigorously enforced by the reviewing courts.

Unlike the substantive duties of Section 101(b), which require agencies to "use all practicable means consistent with other essential considerations," the procedural duties of Section 102 must be fulfilled to the "fullest extent possible."[10] This contrast, in itself, is revealing. But the dispositive factor in our interpretation is the expressed views of the Senate and House conferees who wrote the "fullest extent possible" language into NEPA. They stated:[11]

"\* \* \* The purpose of the new language is to make it clear that each agency of the Federal Government shall comply with the directives set out in \* \* \* [Section 102(2)] unless the existing law applicable to such agency's operations expressly prohibits or makes full compliance with one of the directives impossible. \* \* \* Thus, it is the intent of the conferees 1115\*1115 that the provision `to the fullest extent possible' shall not be used by any Federal agency as a means of avoiding compliance with the directives set out in section 102. Rather, the language in section 102 is intended to assure that all agencies of the Federal Government shall comply with the directives set out in said section `to the fullest extent possible' under their statutory authorizations and that no agency shall utilize an excessively narrow construction of its existing statutory authorizations to avoid compliance."

Thus the Section 102 duties are not inherently flexible. They must be complied with to the fullest extent, unless there is a clear conflict of statutory authority.[12] Considerations of administrative difficulty, delay or economic cost will not suffice to strip the section of its fundamental importance.

We conclude, then, that Section 102 of NEPA mandates a particular sort of careful and informed decisionmaking process and creates judicially enforceable duties. The reviewing courts probably cannot reverse a substantive decision on its merits, under Section 101, unless it be shown that the actual balance of costs and benefits that was struck was arbitrary or clearly gave insufficient weight to environmental values. But if the decision was reached procedurally without individualized consideration and balancing of environmental factors — conducted fully and in good faith — it is the responsibility of the courts to reverse. As one District Court has said of Section 102 requirements: "It is hard to imagine a clearer or stronger mandate to the Courts."[13]

In the cases before us now, we do not have to review a particular decision by 1116\*1116 the Atomic Energy Commission granting a construction permit or an operating license. Rather, we must review the Commission's recently promulgated rules which govern consideration of environmental values in all such individual decisions.[14] The rules were devised strictly in order to comply with the NEPA procedural requirements — but petitioners argue that they fall far short of the congressional mandate.

The period of the rules' gestation does not indicate overenthusiasm on the Commission's part. NEPA went into effect on January 1, 1970. On April 2, 1970 — three months later — the Commission issued its first, short policy statement on implementation of the Act's procedural provisions.[15] After another span of two months, the Commission published a notice of proposed rule making in the Federal Register.[16] Petitioners submitted substantial comments critical of the proposed rules. Finally, on December 3, 1970, the Commission terminated its long rule making proceeding by issuing a formal amendment, labelled Appendix D, to its governing regulations.[17] Appendix D is a somewhat revised version of the earlier proposal and, at last, commits the Commission to consider environmental impact in its decision making process.

The procedure for environmental study and consideration set up by the Appendix D rules is as follows: Each applicant for an initial construction permit must submit to the Commission his own "environmental report," presenting his assessment of the environmental impact of the planned facility and possible alternatives which would alter the impact. When construction is completed and the applicant applies for a license to operate the new facility, he must again submit an "environmental report" noting any factors which have changed since the original report. At each stage, the Commission's regulatory staff must take the applicant's report and prepare its own "detailed statement" of environmental costs, benefits and alternatives. The statement will then be circulated to other interested and responsible agencies and made available to the public. After comments are received from those sources, the staff must prepare a final "detailed statement" and make a final recommendation on the application for a construction permit or operating license.

Up to this point in the Appendix D rules petitioners have raised no challenge. However, they do attack four other, specific parts of the rules which, they say, violate the requirements of Section 102 of NEPA. Each of these parts in some way limits full consideration and individualized balancing of environmental values in the Commission's decision making process. (1) Although environmental factors must be considered by the agency's regulatory staff under the rules, such factors need not be considered by the hearing board conducting an independent review of staff recommendations, 1117\*1117 unless affirmatively raised by outside parties or staff members. (2) Another part of the procedural rules prohibits any such party from raising nonradiological environmental issues at any hearing if the notice for that hearing appeared in the Federal Register before March 4, 1971. (3) Moreover, the hearing board is prohibited from conducting an independent evaluation and balancing of certain environmental factors if other responsible agencies have already certified that their own environmental standards are satisfied by the proposed federal action. (4) Finally, the Commission's rules provide that when a construction permit for a facility has been issued before NEPA compliance was required and when an operating license has yet to be issued, the agency will not formally consider environmental factors or require modifications in the proposed facility until the time of the issuance of the operating license. Each of these parts of the Commission's rules will be described at greater length and evaluated under NEPA in the following sections of this opinion.

II

NEPA makes only one specific reference to consideration of environmental values in agency review processes. Section 102(2) (C) provides that copies of the staff's "detailed statement" and comments thereon "shall accompany the proposal through the existing agency review processes." The Atomic Energy Commission's rules may seem in technical compliance with the letter of that provision. They state:

"12. If any party to a proceeding \* \* \* raises any [environmental] issue \* \* \* the Applicant's Environmental Report and the Detailed Statement will be offered in evidence. The atomic safety and licensing board will make findings of fact on, and resolve, the matters in controversy among the parties with regard to those issues. Depending on the resolution of those issues, the permit or license may be granted, denied, or appropriately conditioned to protect environmental values.

"13. When no party to a proceeding \* \* \* raises any [environmental] issue \* \* \* such issues will not be considered by the atomic safety and licensing board. Under such circumstances, although the Applicant's Environmental Report, comments thereon, and the Detailed Statement will accompany the application through the Commission's review processes, they will not be received in evidence, and the Commission's responsibilities under the National Environmental Policy Act of 1969 will be carried out in toto outside the hearing process."[18]

The question here is whether the Commission is correct in thinking that its NEPA responsibilities may "be carried out in toto outside the hearing process" — whether it is enough that environmental data and evaluations merely "accompany" an application through the review process, but receive no consideration whatever from the hearing board.

We believe that the Commission's crabbed interpretation of NEPA makes a mockery of the Act. What possible purpose could there be in the Section 102 (2) (C) requirement (that the "detailed statement" accompany proposals through agency review processes) if "accompany" means no more than physical proximity — mandating no more than the physical act of passing certain folders and papers, unopened, to reviewing officials along with other folders and papers? What possible purpose could there be in requiring the "detailed statement" to be before hearing boards, if the boards are free to ignore entirely the contents of the statement? NEPA was meant to do more than regulate the flow of papers in the federal bureaucracy. The word "accompany" in Section 102(2) (C) must not be read so narrowly as to make the Act ludicrous. It must, rather, be read to indicate a congressional intent 1118\*1118 that environmental factors, as compiled in the "detailed statement," be considered through agency review processes.[19]

Beyond Section 102(2) (C), NEPA requires that agencies consider the environmental impact of their actions "to the fullest extent possible." The Act is addressed to agencies as a whole, not only to their professional staffs. Compliance to the "fullest" possible extent would seem to demand that environmental issues be considered at every important stage in the decision making process concerning a particular action — at every stage where an overall balancing of environmental and nonenvironmental factors is appropriate and where alterations might be made in the proposed action to minimize environmental costs. Of course, consideration which is entirely duplicative is not necessarily required. But independent review of staff proposals by hearing boards is hardly a duplicative function. A truly independent review provides a crucial check on the staff's recommendations. The Commission's hearing boards automatically consider nonenvironmental factors, even though they have been previously studied by the staff. Clearly, the review process is an appropriate stage at which to balance conflicting factors against one another. And, just as clearly, it provides an important opportunity to reject or significantly modify the staff's recommended action. Environmental factors, therefore, should not be singled out and excluded, at this stage, from the proper balance of values envisioned by NEPA.

The Commission's regulations provide that in an uncontested proceeding the hearing board shall on its own "determine whether the application and the record of the proceeding contain sufficient information, and the review of the application by the Commission's regulatory staff has been adequate, to support affirmative findings on" various nonenvironmental factors.[20] NEPA requires at least as much automatic consideration of environmental factors. In uncontested hearings, the board need not necessarily go over the same ground covered in the "detailed statement." But it must at least examine the statement carefully to determine whether "the review \* \* \* by the Commission's regulatory staff has been adequate." And it must independently consider the final balance among conflicting factors that is struck in the staff's recommendation.

The rationale of the Commission's limitation of environmental issues to hearings in which parties affirmatively raise those issues may have been one of economy. It may have been supposed that, whenever there are serious environmental costs overlooked or uncorrected by the staff, some party will intervene to bring those costs to the hearing board's attention. Of course, independent review of the "detailed statement" and independent balancing of factors in an uncontested hearing will take some time. If it is done properly, it will take a significant amount of time. But all of the NEPA procedures take time. Such administrative costs are not enough to undercut the Act's requirement that environmental protection be considered "to the fullest extent possible," see text at page 1114, supra. It is, moreover, unrealistic to assume that there will always be an intervenor with the information, energy and money required to challenge a staff recommendation which ignores 1119\*1119 environmental costs. NEPA establishes environmental protection as an integral part of the Atomic Energy Commission's basic mandate. The primary responsibility for fulfilling that mandate lies with the Commission. Its responsibility is not simply to sit back, like an umpire, and resolve adversary contentions at the hearing stage. Rather, it must itself take the initiative of considering environmental values at every distinctive and comprehensive stage of the process beyond the staff's evaluation and recommendation.[21]

III

Congress passed the final version of NEPA in late 1969, and the Act went into full effect on January 1, 1970. Yet the Atomic Energy Commission's rules prohibit any consideration of environmental issues by its hearing boards at proceedings officially noticed before March 4, 1971.[22] This is 14 months after the effective date of NEPA. And the hearings affected may go on for as much as a year longer until final action is taken. The result is that major federal actions having a significant environmental impact may be taken by the Commission, without full NEPA compliance, more than two years after the Act's effective date. In view of the importance of environmental consideration during the agency review process, see Part II supra, such a time lag is shocking.

The Commission explained that its very long time lag was intended "to provide an orderly period of transition in the conduct of the Commission's regulatory proceedings and to avoid unreasonable delays in the construction and operation of nuclear power plants urgently needed to meet the national requirements for electric power."[23] Before this court, it has claimed authority for its action, arguing that "the statute did not lay down detailed guidelines and inflexible timetables for its implementation; and we find in it no bar to agency provisions which are designed to accommodate transitional implementation problems."[24]

Again, the Commission's approach to statutory interpretation is strange indeed — so strange that it seems to reveal a rather thoroughgoing reluctance to meet the NEPA procedural obligations in the agency review process, the stage at which deliberation is most open to public examination and subject to the participation of public intervenors. The Act, it is true, lacks an "inflexible timetable" for its implementation. But it does have a clear effective date, consistently 1120\*1120 enforced by reviewing courts up to now. Every federal court having faced the issues has held that the procedural requirements of NEPA must be met in order to uphold federal action taken after January 1, 1970.[25] The absence of a "timetable" for compliance has never been held sufficient, in itself, to put off the date on which a congressional mandate takes effect. The absence of a "timetable," rather, indicates that compliance is required forthwith.

The only part of the Act which even implies that implementation may be subject, in some cases, to some significant delay is Section 103. There, Congress provided that all agencies must review "their present statutory authority, administrative regulations, and current policies and procedures for the purpose of determining whether there are any deficiencies or inconsistencies therein which prohibit full compliance" with NEPA. Agencies finding some such insuperable difficulty are obliged to "propose to the President not later than July 1, 1971, such measures as may be necessary to bring their authority and policies into conformity with the intent, purposes, and procedures set forth in this Act."

The Commission, however, cannot justify its time lag under these Section 103 provisions. Indeed, it has not attempted to do so; only intervenors have raised the argument. Section 103 could support a substantial delay only by an agency which in fact discovered an insuperable barrier to compliance with the Act and required time to formulate and propose the needed reformative measures. The actual review of existing statutory authority and regulations cannot be a particularly lengthy process for experienced counsel of a federal agency. Of course, the Atomic Energy Commission discovered no obstacle to NEPA implementation. Although it did not report its conclusion to the President until October 2, 1970, that nine-month delay (January to October) cannot justify so long a period of noncompliance with the Act. It certainly cannot justify a further delay of compliance until March 4, 1971.

No doubt the process formulating procedural rules to implement NEPA takes some time. Congress cannot have expected that federal agencies would immediately begin considering environmental issues on January 1, 1970. But the effective date of the Act does set a time for agencies to begin adopting rules and it demands that they strive, "to the fullest extent possible," to be prompt in the process. The Atomic Energy Commission has failed in this regard.[26] Consideration of environmental issues in the agency review process, for example, is quite clearly compelled by the Act.[27] The Commission cannot justify its 11-month delay in adopting rules on this point as part of a difficult, discretionary effort to decide whether or not its hearing boards should deal with environmental questions at all.

Even if the long delay had been necessary, however, the Commission would not be relieved of all NEPA responsibility to hold public hearings on the environmental consequences of actions taken between January 1, 1970 and final adoption 1121\*1121 of the rules. Although the Act's effective date may not require instant compliance, it must at least require that NEPA procedures, once established, be applied to consider prompt alterations in the plans or operations of facilities approved without compliance.[28] Yet the Commission's rules contain no such provision. Indeed, they do not even apply to the hearings still being conducted at the time of their adoption on December 3, 1970 — or, for that matter, to hearings initiated in the following three months. The delayed compliance date of March 4, 1971, then, cannot be justified by the Commission's long drawn out rule making process.

Strangely, the Commission has principally relied on more pragmatic arguments. It seems an unfortunate affliction of large organizations to resist new procedures and to envision massive roadblocks to their adoption. Hence the Commission's talk of the need for an "orderly transition" to the NEPA procedures. It is difficult to credit the Commission's argument that several months were needed to work the consideration of environmental values into its review process. Before the enactment of NEPA, the Commission already had regulations requiring that hearings include health, safety and radiological matters.[29] The introduction of environmental 1122\*1122 matters cannot have presented a radically unsettling problem. And, in any event, the obvious sense of urgency on the part of Congress should make clear that a transition, however "orderly," must proceed at a pace faster than a funeral procession.

In the end, the Commission's long delay seems based upon what it believes to be a pressing national power crisis. Inclusion of environmental issues in pre-March 4, 1971 hearings might have held up the licensing of some power plants for a time. But the very purpose of NEPA was to tell federal agencies that environmental protection is as much a part of their responsibility as is protection and promotion of the industries they regulate. Whether or not the spectre of a national power crisis is as real as the Commission apparently believes, it must not be used to create a blackout of environmental consideration in the agency review process. NEPA compels a case-by-case examination and balancing of discrete factors. Perhaps there may be cases in which the need for rapid licensing of a particular facility would justify a strict time limit on a hearing board's review of environmental issues; but a blanket banning of such issues until March 4, 1971 is impermissible under NEPA.

IV

The sweep of NEPA is extraordinarily broad, compelling consideration of any and all types of environmental impact of federal action. However, the Atomic Energy Commission's rules specifically exclude from full consideration a wide variety of environmental issues. First, they provide that no party may raise and the Commission may not independently examine any problem of water quality — perhaps the most significant impact of nuclear power plants. Rather, the Commission indicates that it will defer totally to water quality standards devised and administered by state agencies and approved by the federal government under the Federal Water Pollution Control Act.[30] Secondly, the rules provide for similar abdication of NEPA authority to the standards of other agencies:

"With respect to those aspects of environmental quality for which environmental quality standards and requirements have been established by authorized Federal, State, and regional agencies, proof that the applicant is equipped to observe and agrees to observe such standards and requirements will be considered a satisfactory showing that there will not be a significant, adverse effect on the environment. Certification by the appropriate agency that there is reasonable assurance that the applicant for the permit or license will observe such standards and requirements will be considered dispositive for this purpose."[31]

The most the Commission will do is include a condition in all construction permits and operating licenses requiring compliance with the water quality or other standards set by such agencies.[32] The upshot is that the NEPA procedures, viewed by the Commission as superfluous, will wither away in disuse, applied 1123\*1123 only to those environmental issues wholly unregulated by any other federal, state or regional body.

We believe the Commission's rule is in fundamental conflict with the basic purpose of the Act. NEPA mandates a case-by-case balancing judgment on the part of federal agencies. In each individual case, the particular economic and technical benefits of planned action must be assessed and then weighed against the environmental costs; alternatives must be considered which would affect the balance of values. See text at page 1113 supra. The magnitude of possible benefits and possible costs may lie anywhere on a broad spectrum. Much will depend on the particular magnitudes involved in particular cases. In some cases, the benefits will be great enough to justify a certain quantum of environmental costs; in other cases, they will not be so great and the proposed action may have to be abandoned or significantly altered so as to bring the benefits and costs into a proper balance. The point of the individualized balancing analysis is to ensure that, with possible alterations, the optimally beneficial action is finally taken.

Certification by another agency that its own environmental standards are satisfied involves an entirely different kind of judgment. Such agencies, without overall responsibility for the particular federal action in question, attend only to one aspect of the problem: the magnitude of certain environmental costs. They simply determine whether those costs exceed an allowable amount. Their certification does not mean that they found no environmental damage whatever. In fact, there may be significant environmental damage (e. g., water pollution), but not quite enough to violate applicable (e. g., water quality) standards. Certifying agencies do not attempt to weigh that damage against the opposing benefits. Thus the balancing analysis remains to be done. It may be that the environmental costs, though passing prescribed standards, are nonetheless great enough to outweigh the particular economic and technical benefits involved in the planned action. The only agency in a position to make such a judgment is the agency with overall responsibility for the proposed federal action — the agency to which NEPA is specifically directed.

The Atomic Energy Commission, abdicating entirely to other agencies' certifications, neglects the mandated balancing analysis. Concerned members of the public are thereby precluded from raising a wide range of environmental issues in order to affect particular Commission decisions. And the special purpose of NEPA is subverted.

Arguing before this court, the Commission has made much of the special environmental expertise of the agencies which set environmental standards. NEPA did not overlook this consideration. Indeed, the Act is quite explicit in describing the attention which is to be given to the views and standards of other agencies. Section 102 (2) (C) provides:

"Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statement and the comments and views of the appropriate Federal, State, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available to the President, the Council on Environmental Quality and to the public \* \* \*."

Thus the Congress was surely cognizant of federal, state and local agencies "authorized to develop and enforce environmental standards." But it provided, in Section 102(2) (C), only for full consultation. It most certainly did not authorize a total abdication to those agencies. Nor did it grant a license to disregard the main body of NEPA obligations.

1124\*1124 Of course, federal agencies such as the Atomic Energy Commission may have specific duties, under acts other than NEPA, to obey particular environmental standards. Section 104 of NEPA makes clear that such duties are not to be ignored:

"Nothing in Section 102 or 103 shall in any way affect the specific statutory obligations of any Federal agency (1) to comply with criteria or standards of environmental quality, (2) to coordinate or consult with any other Federal or State agency, or (3) to act, or refrain from acting contingent upon the recommendations or certification of any other Federal or State agency."

On its face, Section 104 seems quite unextraordinary, intended only to see that the general procedural reforms achieved in NEPA do not wipe out the more specific environmental controls imposed by other statutes. Ironically, however, the Commission argues that Section 104 in fact allows other statutes to wipe out NEPA.

Since the Commission places great reliance on Section 104 to support its abdication to standard setting agencies, we should first note the section's obvious limitation. It deals only with deference to such agencies which is compelled by "specific statutory obligations." The Commission has brought to our attention one "specific statutory obligation": the Water Quality Improvement Act of 1970 (WQIA).[33] That Act prohibits federal licensing bodies, such as the Atomic Energy Commission, from issuing licenses for facilities which pollute "the navigable waters of the United States" unless they receive a certification from the appropriate agency that compliance with applicable water quality standards is reasonably assured. Thus Section 104 applies in some fashion to consideration of water quality matters. But it definitely cannot support — indeed, it is not even relevant to — the Commission's wholesale abdication to the standards and certifications of any and all federal, state and local agencies dealing with matters other than water quality.

As to water quality, Section 104 and WQIA clearly require obedience to standards set by other agencies. But obedience does not imply total abdication. Certainly, the language of Section 104 does not authorize an abdication. It does not suggest that other "specific statutory obligations" will entirely replace NEPA. Rather, it ensures that three sorts of "obligations" will not be undermined by NEPA: (1) the obligation to "comply" with certain standards, (2) the obligation to "coordinate" or "consult" with certain agencies, and (3) the obligation to "act, or refrain from acting contingent upon" a certification from certain agencies. WQIA imposes the third sort of obligation. It makes the granting of a license by the Commission "contingent upon" a water quality certification. But it does not require the Commission to grant a license once a certification has been issued. It does not preclude the Commission from demanding water pollution controls from its licensees which are more strict than those demanded by the applicable water quality standards of the certifying agency.[34] It is very important to understand 1125\*1125 these facts about WQIA. For all that Section 104 of NEPA does is to reaffirm other "specific statutory obligations." Unless those obligations are plainly mutually exclusive with the requirements of NEPA, the specific mandate of NEPA must remain in force. In other words, Section 104 can operate to relieve an agency of its NEPA duties only if other "specific statutory obligations" clearly preclude performance of those duties.

Obedience to water quality certifications under WQIA is not mutually exclusive with the NEPA procedures. It does not preclude performance of the NEPA duties. Water quality certifications essentially establish a minimum condition for the granting of a license. But they need not end the matter. The Commission can then go on to perform the very different operation of balancing the overall benefits and costs of a particular proposed project, and consider alterations (above and beyond the applicable water quality standards) which would further reduce environmental damage. Because the Commission can still conduct the NEPA balancing analysis, consistent with WQIA, Section 104 does not exempt it from doing so. And it, therefore, must conduct the obligatory analysis under the prescribed procedures.

We believe the above result follows from the plain language of Section 104 of NEPA and WQIA. However, the Commission argues that we should delve beneath the plain language and adopt a significantly different interpretation. It relies entirely upon certain statements made by Senator Jackson and Senator Muskie, the sponsors of NEPA and WQIA respectively.[35] Those statements indicate that Section 104 was the product of a compromise intended to eliminate any conflict between the two bills then in the Senate. The overriding purpose was to prevent NEPA from eclipsing obedience to more specific standards under WQIA. Senator Muskie, distrustful of "self-policing by Federal agencies which pollute or license pollution," was particularly concerned that NEPA not undercut the independent role of standard setting agencies.[36] Most of his and Senator Jackson's comments stop short of suggesting that NEPA would have no application in water quality matters; their goal was to protect WQIA, not to undercut NEPA. Our interpretation of Section 104 is perfectly consistent with that purpose.

Yet the statements of the two Senators occasionally indicate they were willing to go farther, to permit agencies such as the Atomic Energy Commission to forego at least some NEPA procedures in consideration of water quality. Senator Jackson, for example, said, "The compromise worked out between the bills provides that the licensing agency will not have to make a detailed statement on water quality if the State or other appropriate agency has made a certification pursuant to [WQIA]."[37] 1126\*1126 Perhaps Senator Jackson would have required some consideration and balancing of environmental costs — despite the lack of a formal detailed statement — but he did not spell out his views. No Senator, other than Senators Jackson and Muskie, addressed himself specifically to the problem during floor discussion. Nor did any member of the House of Representatives.[38] The section-by-section analysis of NEPA submitted to the Senate clearly stated the overriding purpose of Section 104: that "no agency may substitute the procedures outlined in this Act for more restrictive and specific procedures established by law governing its activities."[39] The report does not suggest there that NEPA procedures should be entirely abandoned, but rather that they should not be "substituted" for more specific standards. In one rather cryptic sentence, the analysis does muddy the waters somewhat, stating that "[i]t is the intention that where there is no more effective procedure already established, the procedure of this act will be followed."[40] Notably, however, the sentence does not state that in the presence of "more effective procedures" the NEPA procedure will be abandoned entirely. It seems purposefully vague, quite possibly meaning that obedience to the certifications of standard setting agencies must alter, by supplementing, the normal "procedure of this act."

This rather meager legislative history, in our view, cannot radically transform the purport of the plain words of Section 104. Had the Senate sponsors fully intended to allow a total abdication of NEPA responsibilities in water quality matters — rather than a supplementing of them by strict obedience to the specific standards of WQIA — the language of Section 104 could easily have been changed. As the Supreme Court often has said, the legislative history of a statute (particularly such relatively meager and vague history as we have here) cannot radically affect its interpretation if the language of the statute is clear. See, e. g., Packard Motor Car Co. v. NLRB, 330 U.S. 485, 67 S.Ct. 789, 91 L.Ed. 1040 (1947); Kuehner v. Irving Trust Co., 299 U.S. 445, 57 S.Ct. 298, 81 L.Ed. 340 (1937); Fairport, Painesville & Eastern R. Co. v. Meredith, 292 U.S. 589, 54 S.Ct. 826, 78 L.Ed. 1446 (1934); Wilbur v. United States ex rel. Vindicator Consolidated Gold Mining Co., 284 U.S. 231, 52 S.Ct. 113, 76 L.Ed. 261 (1931). In a recent case interpreting a veterans' act, the Court set down the principle which must govern our approach to the case before us:

"Having concluded that the provisions of § 1 are clear and unequivocal on their face, we find no need to resort to the legislative history of the Act. Since the State has placed such heavy reliance upon that history, however, we do deem it appropriate to point out that this history is at best inconclusive. It is true, as the State points out, that Representative Rankin, as Chairman of the Committee handling the bill on the floor of the House, expressed his view during the course of discussion of the bill on the floor that the 1941 Act would not apply to [the sort of case in question] \* \* \*. But such statements, even when they stand alone, have never been regarded as sufficiently compelling to justify deviation from the plain language of a statute. \* \* \*"

1127\*1127 United States v. Oregon, 366 U.S. 643, 648, 81 S.Ct. 1278, 1281, 6 L.Ed.2d 575 (1961). (Footnotes omitted.) It is, after all, the plain language of the statute which all the members of both houses of Congress must approve or disapprove. The courts should not allow that language to be significantly undercut. In cases such as this one, the most we should do to interpret clear statutory wording is to see that the overriding purpose behind the wording supports its plain meaning. We have done that here. And we conclude that Section 104 of NEPA does not permit the sort of total abdication of responsibility practiced by the Atomic Energy Commission.

V

Petitioners' final attack is on the Commission's rules governing a particular set of nuclear facilities: those for which construction permits were granted without consideration of environmental issues, but for which operating licenses have yet to be issued. These facilities, still in varying stages of construction, include the one of most immediate concern to one of the petitioners: the Calvert Cliffs nuclear power plant on Chesapeake Bay in Maryland.

The Commission's rules recognize that the granting of a construction permit before NEPA's effective date does not justify bland inattention to environmental consequences until the operating license proceedings, perhaps far in the future. The rules require that measures be taken now for environmental protection. Specifically, the Commission has provided for three such measures during the pre-operating license stage. First, it has required that a condition be added to all construction permits, "whenever issued," which would oblige the holders of the permits to observe all applicable environmental standards imposed by federal or state law. Second, it has required permit holders to submit their own environmental report on the facility under construction. And third, it has initiated procedures for the drafting of its staff's "detailed environmental statement" in advance of operating license proceedings.[41]

The one thing the Commission has refused to do is take any independent action based upon the material in the environmental reports and "detailed statements." Whatever environmental damage the reports and statements may reveal, the Commission will allow construction to proceed on the original plans. It will not even consider requiring alterations in those plans (beyond compliance with external standards which would be binding in any event), though the "detailed statements" must contain an analysis of possible alternatives and may suggest relatively inexpensive but highly beneficial changes. Moreover, the Commission has, as a blanket policy, refused to consider the possibility of temporarily halting construction in particular cases pending a full study of a facility's environmental impact. It has also refused to weigh the pros and cons of "backfitting" for particular facilities (alteration of already constructed portions of the facilities in order to incorporate new technological developments designed to protect the environment). Thus reports and statements will be produced, but nothing will be done with them. Once again, the Commission seems to believe that the mere drafting and filing of papers is enough to satisfy NEPA.

The Commission appears to recognize the severe limitation which its rules impose on environmental protection. Yet it argues that full NEPA consideration of alternatives and independent action would cause too much delay at the pre-operating license stage. It justifies its rules as the most that is "practicable, in the light of environmental needs and `other essential considerations of national policy'."[42] It cites, in particular, the "national power crisis" as a consideration 1128\*1128 of national policy militating against delay in construction of nuclear power facilities.

The Commission relies upon the flexible NEPA mandate to "use all practicable means consistent with other essential considerations of national policy." As we have previously pointed out, however, that mandate applies only to the substantive guidelines set forth in Section 101 of the Act. See page 1114 supra. The procedural duties, the duties to give full consideration to environmental protection, are subject to a much more strict standard of compliance. By now, the applicable principle should be absolutely clear. NEPA requires that an agency must — to the fullest extent possible under its other statutory obligations — consider alternatives to its actions which would reduce environmental damage. That principle establishes that consideration of environmental matters must be more than a pro forma ritual. Clearly, it is pointless to "consider" environmental costs without also seriously considering action to avoid them. Such a full exercise of substantive discretion is required at every important, appropriate and nonduplicative stage of an agency's proceedings. See text at page 1114 supra.

The special importance of the pre-operating license stage is not difficult to fathom. In cases where environmental costs were not considered in granting a construction permit, it is very likely that the planned facility will include some features which do significant damage to the environment and which could not have survived a rigorous balancing of costs and benefits. At the later operating license proceedings, this environmental damage will have to be fully considered. But by that time the situation will have changed radically. Once a facility has been completely constructed, the economic cost of any alteration may be very great. In the language of NEPA, there is likely to be an "irreversible and irretrievable commitment of resources," which will inevitably restrict the Commission's options. Either the licensee will have to undergo a major expense in making alterations in a completed facility or the environmental harm will have to be tolerated. It is all too probable that the latter result would come to pass.

By refusing to consider requirement of alterations until construction is completed, the Commission may effectively foreclose the environmental protection desired by Congress. It may also foreclose rigorous consideration of environmental factors at the eventual operating license proceedings. If "irreversible and irretrievable commitment[s] of resources" have already been made, the license hearing (and any public intervention therein) may become a hollow exercise. This hardly amounts to consideration of environmental values "to the fullest extent possible."

A full NEPA consideration of alterations in the original plans of a facility, then, is both important and appropriate well before the operating license proceedings. It is not duplicative if environmental issues were not considered in granting the construction permit. And it need not be duplicated, absent new information or new developments, at the operating license stage. In order that the pre-operating license review be as effective as possible, the Commission should consider very seriously the requirement of a temporary halt in construction pending its review and the "backfitting" of technological innovations. For no action which might minimize environmental damage may be dismissed out of hand. Of course, final operation of the facility may be delayed thereby. But some delay is inherent whenever the NEPA consideration is conducted — whether before or at the license proceedings. It is far more consistent with the purposes of the Act to delay operation at a stage where real environmental protection may come about than at a stage where corrective action may be so costly as to be impossible.

Thus we conclude that the Commission must go farther than it has in 1129\*1129 its present rules. It must consider action, as well as file reports and papers, at the pre-operating license stage. As the Commission candidly admits, such consideration does not amount to a retroactive application of NEPA. Although the projects in question may have been commenced and initially approved before January 1, 1970, the Act clearly applies to them since they must still pass muster before going into full operation.[43] All we demand is that the environmental review be as full and fruitful as possible.

VI

We hold that, in the four respects detailed above, the Commission must revise its rules governing consideration of environmental issues. We do not impose a harsh burden on the Commission. For we require only an exercise of substantive discretion which will protect the environment "to the fullest extent possible." No less is required if the grand congressional purposes underlying NEPA are to become a reality.

Remanded for proceedings consistent with this opinion.

## Footnotes

[1] See, e. g., Environmental Education Act, 20 U.S.C.A. § 1531 (1971 Pocket Part); Air Quality Act of 1967, 42 U.S.C. § 1857 et seq. (Supp. V 1965-1969); Environmental Quality Improvement Act of 1970, 42 U.S.C.A. §§ 4371-4374 (1971 Pocket Part); Water and Environmental Quality Improvement Act of 1970, Pub. L. 91-224, 91st Cong., 2d Sess. (1970), 84 Stat. 91.

[2] 42 U.S.C.A. § 4321 et seq. (1971 Pocket Part).

[3] The full text of Title I is printed as an appendix to this opinion.

[4] Before the enactment of NEPA, the Commission did recognize its separate statutory mandate to consider the specific radiological hazards caused by its actions; but it argued that it could not consider broader environmental impacts. Its position was upheld in State of New Hampshire v. Atomic Energy Commission, 1 Cir., 406 F.2d 170, cert. denied, 395 U.S. 962, 89 S.Ct. 2100, 23 L.Ed.2d 748 (1969).

[5] Only once — in § 102(2) (B) — does the Act state, in terms, that federal agencies must give full "consideration" to environmental impact as part of their decision making processes. However, a requirement of consideration is clearly implicit in the substantive mandate of § 101, in the requirement of § 102(1) that all laws and regulations be "interpreted and administered" in accord with that mandate, and in the other specific procedural meassures compelled by § 102(2). The only circuit to interpret NEPA to date has said that "[t]his Act essentially states that every federal agency shall consider ecological factors when dealing with activities which may have an impact on man's environment." Zabel v. Tabb, 5 Cir., 430 F.2d 199, 211 (1970). Thus a purely mechanical compliance with the particular measures required in § 102 (2) (C) & (D) will not satisfy the Act if they do not amount to full good faith consideration of the environment. See text at page 1116 infra. The requirements of § 102(2) must not be read so narrowly as to erase the general import of §§ 101, 102(1) and 102(2) (A) & (B).

On April 23, 1971, the Council on Environmental Quality — established by NEPA — issued guidelines for federal agencies on compliance with the Act. 36 Fed. Reg. 7723 (April 23, 1971). The Council stated that "[t]he objective of section 102(2) (C) of the Act and of these guidelines is to build into the agency decision making process an appropriate and careful consideration of the environmental aspects of proposed action \* \* \*." Id. at 7724.

[6] Hearings on S. 1075, S. 237 and S. 1752 Before Senate Committee on Interior and Insular Affairs, 91st Cong., 1st Sess. 206 (1969). Just before the Senate finally approved NEPA, Senator Jackson said on the floor that the Act "directs all agencies to assure consideration of the environmental impact of their actions in decisionmaking." 115 Cong.Rec. (Part 30) 40416 (1969).

[7] Hearings on S. 1075, supra Note 6, at 116. Again, the Senator reemphasized his point on the floor of the Senate, saying: "To insure that the policies and goals defined in this act are infused into the ongoing programs and actions of the Federal Government, the act also established some important `action-forcing' procedures." 115 Cong.Rec. (Part 30) at 40416. The Senate Committee on Interior and Insular Affairs Committee Report on NEPA also stressed the importance of the "action-forcing" provisions which require full and rigorous consideration of environmental values as an integral part of agency decision making. S.Rep.No.91-296, 91st Cong., 1st Sess. (1969).

[8] The word "appropriate" in § 102(2) (B) cannot be interpreted to blunt the thrust of the whole Act or to give agencies broad discretion to downplay environmental factors in their decision making processes. The Act requires consideration "appropriate" to the problem of protecting our threatened environment, not consideration "appropriate" to the whims, habits or other particular concerns of federal agencies. See Note 5 supra.

[9] Senator Jackson specifically recognized the requirement of a balancing judgment. He said on the floor of the Senate: "Subsection 102(b) requires the development of procedures designed to insure that all relevant environmental values and amenities are considered in the calculus of project development and decisionmaking. Subsection 102(c) establishes a procedure designed to insure that in instances where a proposed major Federal action would have a significant impact on the environment that the impact has in fact been considered, that any adverse effects which cannot be avoided are justified by some other stated consideration of national policy, that short-term uses are consistent with long-term productivity, and that any irreversible and irretrievable commitments of resources are warranted." 115 Cong.Rec. (Part 21) 29055 (1969).

[10] The Commission, arguing before this court, has mistakenly confused the two standards, using the § 101(b) language to suggest that it has broad discretion in performance of § 102 procedural duties. We stress the necessity to separate the two, substantive and procedural, standards. See text at page 1128 infra.

[11] The Senators' views are contained in "Major Changes in S. 1075 as Passed by the Senate," 115 Cong.Rec. (Part 30) at 40417-40418. The Representatives' views are contained in a separate statement filed with the Conference Report, 115 Cong.Rec. (Part 29) 39702-39703 (1969).

[12] Section 104 of NEPA provides that the Act does not eliminate any duties already imposed by other "specific statutory obligations." Only when such specific obligations conflict with NEPA do agencies have a right under § 104 and the "fullest extent possible" language to dilute their compliance with the full letter and spirit of the Act. See text at page 1123 infra. Sections 103 and 105 also support the general interpretation that the "fullest extent possible" language exempts agencies from full compliance only when there is a conflict of statutory obligations. Section 103 provides for agency review of existing obligations in order to discover and, if possible, correct any conflicts. See text at pages 1020-1021 infra. And § 105 provides that "[t]he policies and goals set forth in this Act are supplementary to those set forth in existing authorizations of Federal agencies." The report of the House conferees states that § 105 "does not \* \* \* obviate the requirement that the Federal agencies conduct their activities in accordance with the provisions of this bill unless to do so would clearly violate their existing statutory obligations." 115 Cong.Rev. (Part 29) at 39703. The section-by-section analysis by the Senate conferees makes exactly the same point in slightly different language. 115 Cong.Rec. (Part 30) at 40418. The guidelines published by the Council on Environmental Quality state that "[t]he phrase `to the fullest extent possible' \* \* \* is meant to make clear that each agency of the Federal Government shall comply with the requirement unless existing law applicable to the agency's operations expressly prohibits or makes compliance impossible." 36 Fed. Reg. at 7724.

[13] Texas Committee on Natural Resources v. United States, W.D.Tex., 1 Envir. Rpts — Cas. 1303, 1304 (1970). A few of the courts which have considered NEPA to date have made statements stressing the discretionary aspects of the Act. See, e. g., Pennsylvania Environmental Council v. Bartlett, M.D.Pa., 315 F.Supp. 238 (1970); Bucklein v. Volpe, N.D.Cal., 2 Envir. Rpts — Cas. 1082, 1083 (1970). The Commission and intervenors rely upon these statements quite heavily. However, their reliance is misplaced, since the courts in question were not referring to the procedural duties created by NEPA. Rather, they were concerned with the Act's substantive goals or with such peripheral matters as retroactive application of the Act.

The general interpretation of NEPA which we outline in text at page 1112 supra is fully supported by the scholarly commentary. See, e. g., Donovan, The Federal Government and Environmental Control: Administrative Reform on the Executive Level, 12 B.C.Ind. & Com.L.Rev. 541 (1971); Hanks & Hanks, An Environmental Bill of Rights: The Citizen Suit and the National Environmental Policy Act of 1969, 24 Rutg. L.Rev. 231 (1970); Sive, Some Thoughts of an Environmental Lawyer in the Wilderness of Administrative Law, 70 Colum. L.Rev. 612, 643-650 (1970); Peterson, An Analysis of Title I of the National Environmental Policy Act of 1969, 1 Envir.L.Rptr. 50035 (1971); Yannacone, National Environmental Policy Act of 1969, 1 Envir.Law 8 (1970); Note, The National Environmental Policy Act: A Sheep in Wolf's Clothing?, 37 Brooklyn L.Rev. 139 (1970).

[14] In Case No. 24,871, petitioners attack four aspects of the Commission's rules, which are outlined in text. In Case No. 24,839, they challenge a particular application of the rules in the granting of a particular construction permit — that for the Calvert Cliffs Nuclear Power Plant. However, their challenge consists largely of an attack on the substance of one aspect of the rules also attacked in Case No. 24,871. Thus we are able to resolve both cases together, and our remand to the Commission for further rule making includes a remand for further consideration relating to the Calvert Cliffs Plant in Case No. 24,839. See Part V of this opinion, infra.

[15] 35 Fed.Reg. 5463 (April 2, 1970).

[16] 35 Fed.Reg. 8594 (June 3, 1970).

[17] 35 Fed.Reg. 18469 (December 4, 1970). The version of the rules finally adopted is now printed in 10 C.F.R. § 50, App. D, pp. 246-250 (1971).

[18] 10 C.F.R. § 50, App. D, at 249.

[19] The guidelines issued by the Council on Environmental Quality emphasize the importance of consideration of alternatives to staff recommendations during the agency review process: "A rigorous exploration and objective evaluation of alternative actions that might avoid some or all of the adverse environmental effects is essential. Sufficient analysis of such alternatives and their costs and impact on the environment should accompany the proposed action through the agency review process in order not to foreclose prematurely options which might have less detrimental effects." 36 Fed.Reg. at 7725. The Council also states that an objective of its guidelines is "to assist agencies in implementing not only the letter, but the spirit, of the Act." Id. at 7724.

[20] 10 C.F.R. § 2.104(b) (2) (1971).

[21] In recent years, the courts have become increasingly strict in requiring that federal agencies live up to their mandates to consider the public interest. They have become increasingly impatient with agencies which attempt to avoid or dilute their statutorily imposed role as protectors of public interest values beyond the narrow concerns of industries being regulated. See, e. g., Udall v. FPC, 387 U.S. 428, 87 S.Ct. 1712, 18 L.Ed.2d 869 (1967); Environmental Defense Fund, Inc. v. Ruckelshaus, 142 U.S.App.D.C. 74, 439 F.2d 584 (1971); Moss v. C. A. B., 139 U.S.App.D.C. 150, 430 F.2d 891 (1970); Environmental Defense Fund, Inc. v. U. S. Dept. of H. E. & W., 138 U.S.App.D.C. 381, 428 F.2d 1083 (1970). In commenting on the Atomic Energy Commission's pre-NEPA duty to consider health and safety matters, the Supreme Court said "the responsibility for safeguarding that health and safety belongs under the statute to the Commission." Power Reactor Development Co. v. International Union of Elec., Radio and Mach. Workers, 367 U.S. 396, 404, 81 S.Ct. 1529, 1533, 6 L.Ed.2d 924 (1961). The Second Circuit has made the same point regarding the Federal Power Commission: "In this case, as in many others, the Commission has claimed to be the representative of the public interest. This role does not permit it to act as an umpire blandly calling balls and strikes for adversaries appearing before it; the right of the public must receive active and affirmative protection at the hands of the Commission." Scenic Hudson Preservation Conference v. FPC, 2 Cir., 354 F.2d 608, 620 (1965).

[22] 10 C.F.R. § 50, App. D, at 249.

[23] 35 Fed.Reg. 18470 (December 4, 1970).

[24] Brief for respondents in No. 24,871 at 49.

[25] In some cases, the courts have had a difficult time determining whether particular federal actions were "taken" before or after January 1, 1970. But they have all started from the basic rule that any action taken after that date must comply with NEPA's procedural requirements. See Note, Retroactive Application of the National Environmental Policy Act of 1969, 69 Mich.L.Rev. 732 (1971), and cases cited therein. Clearly, any hearing held between January 1, 1970 and March 4, 1971 which culminates in the grant of a permit or license is a federal action taken after the Act's effective date.

[26] See text at page 1116 supra.

[27] As early as March 5, 1970, President Nixon stated in an executive order that NEPA requires consideration of environmental factors at public hearings. Executive Order 11514, 35 Fed.Reg. 4247 (March 5, 1970). See also Part II of this opinion.

[28] In Part V of this opinion, we hold that the Commission must promptly consider the environmental impact of projects initially approved before January 1, 1970 but not yet granted an operating license. We hold that the Commission may not wait until construction is entirely completed and consider environmental factors only at the operating license hearings; rather, before environmental damage has been irreparably done by full construction of a facility, the Commission must consider alterations in the plans. Much the same principle — of making alterations while they still may be made at relatively small expense — applies to projects approved without NEPA compliance after the Act's effective date. A total reversal of the basic decision to construct a particular facility or take a particular action may then be difficult, since substantial resources may already have been committed to the project. Since NEPA must apply to the project in some fashion, however, it is essential that it apply as effectively as possible — requiring alterations in parts of the project to which resources have not yet been inalterably committed at great expense.

One District Court has dealt with the problem of instant compliance with NEPA. It suggested another measure which agencies should take while in the process of developing rules. It said: "The NEPA does not require the impossible. Nor would it require, in effect, a moratorium on all projects which had an environmental impact while awaiting compliance with § 102(2) (B). It would suffice if the statement pointed out this deficiency. The decisionmakers could then determine whether any purpose would be served in delaying the project while awaiting the development of such criteria." Environmental Defense Fund, Inc. v. Corps of Engineers, E.D.Ark., 325 F.Supp. 749, 758 (1971). Apparently, the Atomic Energy Commission did not even go this far toward considering the lack of a NEPA public hearing as a basis for delaying projects between the Act's effective date and adoption of the rules.

Of course, on the facts of these cases, we need not express any final view on the legal effect of the Commission's failure to comply with NEPA after the Act's effective date. Mere post hoc alterations in plans may not be enough, especially in view of the Commission's long delay in promulgating rules. Less than a year ago, this court was asked to review a refusal by the Atomic Energy Commission to consider environmental factors in granting a license. We held that the case was not yet ripe for review. But we stated: "If the Commission persists in excluding such evidence, it is courting the possibility that if error is found a court will reverse its final order, condemn its proceeding as so much waste motion, and order that the proceeding be conducted over again in a way that realistically permits de novo consideration of the tendered evidence." Thermal Ecology Must be Preserved v. AEC, 139 U.S.App.D.C. 366, 368, 433 F.2d 524, 526 (1970).

[29] See 10 C.F.R. § 20 (1971) for the standards which the Commission had developed to deal with radioactive emissions which might pose health or safety problems.

[30] 10 C.F.R. § 50, App. D, at 249. Appendix D does require that applicants' environmental reports and the Commission's "detailed statements" include "a discussion of the water quality aspects of the proposed action." Id. at 248. But, as is stated in text, it bars independent consideration of those matters by the Commission's reviewing boards at public hearings. It also bars the Commission from requiring — or even considering — any water protection measures not already required by the approving state agencies. See Note 31 infra.

The section of the Federal Water Pollution Control Act establishing a system of state agency certification is § 21, as amended in the Water Quality Improvement Act of 1970. 33 U.S.C.A. § 1171 (1970). In text below, this section is discussed as part of the Water Quality Improvement Act.

[31] 10 C.F.R. § 50, App. D, at 249.

[32] Ibid.

[33] The relevant portion is 33 U.S.C.A. § 1171. See Note 30 supra.

[34] The relevant language in WQIA seems carefully to avoid any such restrictive implication. It provides that "[e]ach Federal agency \* \* \* shall \* \* \* insure compliance with applicable water quality standards \* \* \*." 33 U.S.C.A. § 1171(a). It also provides that "[n]o license or permit shall be granted until the certification required by this section has been obtained or has been waived \* \* \*. No license or permit shall be granted if certification has been denied \* \* \*." 33 U.S.C.A. § 1171(b) (1). Nowhere does it indicate that certification must be the final and only protection against unjustified water pollution — a fully sufficient as well as a necessary condition for issuance of a federal license or permit.

We also take note of § 21(c) of WQIA, which states: "Nothing in this section shall be construed to limit the authority of any department or agency pursuant to any other provision of law to require compliance with applicable water quality standards. \* \* \*" 33 U.S.C.A. § 1171 (c).

[35] The statements by Senators Jackson and Muskie were made, first, at the time the Senate originally considered WQIA. 115 Cong.Rec. (Part 21) at 29052-29056. Another relevant colloquy between the two Senators occurred when the Senate considered the Conference Report on NEPA. 115 Cong.Rec. (Part 30) at 40415-40425. Senator Muskie made a further statement at the time of final Senate approval of the Conference Report on WQIA. 116 Cong.Rec. (daily ed.) S4401 (March 24, 1970).

[36] 115 Cong.Rec. (Part 21) at 29053.

[37] Ibid. See also id. at 29056. Senator Jackson appears not to have ascribed major importance to the compromise. He said, "It is my understanding that there was never any conflict between this section [of WQIA] and the provisions of [NEPA]. If both bills were enacted in their present form, there would be a requirement for State certification, as well as a requirement that the licensing agency make environmental findings." Id. at 29053. He added, "The agreed-upon changes mentioned previously would change the language of some of these requirements, but their substance would remain relatively unchanged." Id. at 29055. Senator Muskie seemed to give greater emphasis to the supposed conflict between the two bills. See id. at 29053; 115 Cong.Rec. (Part 30) at 40425; 116 Cong.Rec. (daily ed.) at S4401.

[38] The Commission has called to our attention remarks made by Congressman Harsha. The Congressman did refer to a statement by Senator Muskie regarding NEPA, but it was a statement regarding application of the Act to established environmental control agencies, not regarding the relationship between NEPA and WQIA. 115 Cong.Rec. (Part 30) at 40927-40928.

[39] Id. at 40420.

[40] Ibid.

[41] 10 C.F.R. § 50, App. D, ¶¶ 1, 14.

[42] Brief for respondents in No. 24,871 at 59.

[43] The courts which have held NEPA to be nonretroactive have not faced situations like the one before us here — situations where there are two, distinct stages of federal approval, one occurring before the Act's effective date and one after that date. See Note, supra Note 25.

The guidelines issued by the Council on Environmental Quality urge agencies to employ NEPA procedures to minimize environmental damage, even when approval of particular projects was given before January 1, 1970: "To the maximum extent practicable the section 102(2) (C) procedure should be applied to further major Federal actions having a significant effect on the environment even though they arise from projects or programs initiated prior to enactment of [NEPA] on January 1, 1970. Where it is not practicable to reassess the basic course of action, it is still important that further incremental major actions be shaped so as to mimimize adverse environmental consequences. It is also important in further action that account be taken of environmental consequences not fully evaluated at the outset of the project or program." 36 Fed.Reg. at 7727.

# Sierra Club v. Federal Energy Regulatory Commission, 867 F.3d 1357 (2017)

Environmental groups and landowners have challenged the decision of the Federal Energy Regulatory Commission to approve the construction and operation of three new interstate natural-gas pipelines in the southeastern United States. Their primary argument is that the agency's assessment of the environmental impact of the pipelines was inadequate. We agree that FERC's environmental impact statement did not contain enough information on the greenhouse-gas emissions that will result from burning the gas that the pipelines will carry. In all other respects, we conclude that FERC acted properly. We thus grant Sierra Club's petition for review and remand for preparation of a conforming environmental impact statement.

[standing discussion deleted]

**III**

Both sets of petitioners rely heavily on the National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852 (1970). NEPA "declares a broad national commitment to protecting and promoting environmental quality," and brings that commitment to bear on the operations of the federal government. *Robertson v. Methow Valley Citizens Council,* 490 U.S. 332, 348, 109 S.Ct. 1835, 104 L.Ed.2d 351 (1989). The statute "commands agencies to imbue their decisionmaking, through the use of certain procedures, with our country's commitment to environmental salubrity." *Citizens Against Burlington, Inc. v. Busey,* 938 F.2d 190, 193-94 (D.C. Cir. 1991). One of the most important procedures NEPA mandates is the preparation, as part of every "major Federal action[ ] significantly affecting the quality of the human environment," of a "detailed statement" discussing and disclosing the environmental impact of the action. 42 U.S.C. § 4332(2)(C).

This environmental impact statement, as it has come to be called, has two purposes. It forces the agency to take a "hard look" at the environmental consequences of its actions, including alternatives to its proposed course. *See id.* § 4332(2)(C)(iii); *Balt. Gas & Elec. Co. v. Nat. Res. Def. Council, Inc.,* 462 U.S. 87, 97, 103 S.Ct. 2246, 76 L.Ed.2d 437 (1983). It also ensures that these environmental consequences, and the agency's consideration of them, are disclosed to the public. *See WildEarth Guardians,* 738 F.3d at 302. Importantly, though, NEPA "directs agencies only to look hard at the environmental effects of their decisions, and not to take one type of action or another." *Citizens Against Burlington,* 938 F.2d at 194. That is, the statute is primarily information-forcing.

The role of the courts in reviewing agency compliance with NEPA is accordingly limited. Furthermore, because NEPA does not create a private right of action, we can entertain NEPA-based challenges only under the Administrative Procedure Act and its deferential standard of review. *See Theodore Roosevelt Conservation P'ship v. Salazar,* 616 F.3d 497, 507 (D.C. Cir. 2010). That is, our mandate "is `simply to ensure that the agency has adequately considered and disclosed the environmental impact of its actions and that its decision is not arbitrary or capricious.'" *WildEarth Guardians,* 738 F.3d at 308 (quoting *City of Olmsted Falls v. FAA,* 292 1368\*1368 F.3d 261, 269 (D.C. Cir. 2002)). We should not "`flyspeck' an agency's environmental analysis, looking for any deficiency no matter how minor." *Nevada v. Dep't of Energy,* 457 F.3d 78, 93 (D.C. Cir. 2006) (citation omitted).

But at the same time, we are responsible for holding agencies to the standard the statute establishes. An EIS is deficient, and the agency action it undergirds is arbitrary and capricious, if the EIS does not contain "sufficient discussion of the relevant issues and opposing viewpoints," *Nevada,* 457 F.3d at 93 (quoting *Nat. Res. Def. Council v. Hodel,* 865 F.2d 288, 294 (D.C. Cir. 1988)), or if it does not demonstrate "reasoned decisionmaking," *Del. Riverkeeper Network v. FERC,* 753 F.3d 1304, 1313 (D.C. Cir. 2014) (quoting *Found. on Econ. Trends v. Heckler,* 756 F.2d 143, 154 (D.C. Cir. 1985)). The overarching question is whether an EIS's deficiencies are significant enough to undermine informed public comment and informed decisionmaking. *See Nevada,* 457 F.3d at 93. This is NEPA's "rule of reason." *See Dep't of Transp. v. Pub. Citizen,* 541 U.S. 752, 767, 124 S.Ct. 2204, 159 L.Ed.2d 60 (2004).

With those principles in mind, we direct our attention to the specific deficiencies the petitioners have alleged in the EIS for the Southeast Market Pipelines Project. As noted above, FERC prepared a single unified EIS for the project's three pipelines, and no party has challenged that approach. Thus, for purposes of our NEPA analysis, we will consider the project as a whole.

**A**

The principle of environmental justice encourages agencies to consider whether the projects they sanction will have a "disproportionately high and adverse" impact on low-income and predominantly minority communities.[4] *See* J.A. 1353-54. Executive Order 12,898 required federal agencies to include environmental-justice analysis in their NEPA reviews, and the Council on Environmental Quality, the independent agency that implements NEPA, *see* 42 U.S.C. § 4344, has promulgated environmental-justice guidance for agencies, *see* J.A. 1369-78.

Sierra Club argues that the EIS failed to adequately take this principle into account. Like the other components of an EIS, an environmental justice analysis is measured against the arbitrary-and-capricious standard. *See Cmtys. Against Runway Expansion, Inc. v. FAA,* 355 F.3d 678, 689 (D.C. Cir. 2004).[5] The analysis must be "reasonable and adequately explained," but the agency's "choice among reasonable analytical methodologies is entitled to deference." *Id.* As always with NEPA, an agency is not required to select the course of action that best serves environmental justice, only to take a "hard look" at environmental justice issues. *See Latin Ams. for Social & Econ. Dev. v. Fed. Highway Admin.,* 756 F.3d 447, 475-77 (6th Cir. 2014). We conclude that FERC's discussion of environmental justice in the EIS satisfies this standard.

The EIS explained that 83.7% of the pipelines' proposed route would cross 1369\*1369 through, or within one mile of, environmental-justice communities (defined as census tracts where the population is disproportionately below the poverty line and/or disproportionately belongs to racial or ethnic minority groups). That percentage varied from 54 to 80 percent for the alternative routes proposed by stakeholders and commenters, albeit with only one option below 70 percent. This type of data appeared not only in the section of the EIS specifically dedicated to environmental justice, but also in the chapter that compared the various alternative routes. That later chapter weighed environmental-justice statistics alongside factors like total route length, wetlands impact, and the number of homes near the route. It also discussed one additional proposed route, which would cross the Gulf of Mexico and avoid Georgia completely. This option would affect far fewer environmental-justice communities, but in FERC's assessment would be infeasible because it would cost an additional two billion dollars.

FERC concluded that the various feasible alternatives "would affect a relatively similar percentage of environmental justice populations," and that the preferred route thus would not have a disproportionate impact on those populations. *See* J.A. 836. The agency also independently concluded that the project would not have a "high and adverse" impact on *any* population, meaning, in the agency's view, that it could not have a "*disproportionately* high and adverse" impact on any population, marginalized or otherwise.[6]

Sierra Club contends that FERC misread "disproportionately high and adverse," the standard for when a particular environmental effect raises an environmental-justice concern. By Sierra Club's lights, any effect can fulfill the test, regardless of its intensity, extent, or duration, if it is not beneficial and falls disproportionately on environmental-justice communities. But even if we assume that understanding to be correct, we cannot see how this EIS was deficient. It discussed the intensity, extent, and duration of the pipelines' environmental effects, and also separately discussed the fact that those effects will disproportionately fall on environmental-justice communities. Recall that the EIS informed readers and the agency's ultimate decisionmakers that 83.7% of the pipelines' length would be in or near environmental-justice communities. The EIS also evaluated route alternatives in part by looking at the number of environmental-justice communities each would cross, and the mileage of pipeline each would place in low-income and minority areas. FERC thus grappled with the disparate impacts of the various possible pipeline routes. Perhaps Sierra Club would have a stronger claim if the agency had refused entirely to discuss the demographics of the populations that will feel the pipelines' effects, and had justified this refusal by pointing to the limited intensity, extent, and duration of those effects. However, as the EIS stands, we see no deficiencies serious enough to defeat the statute's goals of fostering well-informed decisionmaking and public comment. *See Nevada,* 457 F.3d at 93.

The same goes for Sierra Club's other arguments. The agency's methodology was reasonable, even where it deviated from what Sierra Club would have preferred. *See Runway Expansion,* 355 F.3d at 689. Take the agency's decision to compare the demographics along the various proposed routes to each other instead of "the general 1370\*1370 population." Sierra Club Opening Br. 18. An EIS is meant to help agency heads choose among the relevant alternatives, including the alternative of taking no action, and to help the public weigh in. Thus, FERC's decision to directly compare the proposed alternatives to one another, rather than to some broader population, was reasonable under the circumstances. *See id.* (approving an environmental-justice review that compared "the population predicted to be affected by ... [a] project to the demographics of the population that otherwise might conceivably be affected" by the project). Another methodology might be more appropriate in a case where some feasible alternative, with a lower environmental-justice impact, has been left out of the analysis. However, no party has offered any such alternative here.

Sierra Club is particularly concerned about Sabal Trail's plan to build a compressor station (a facility that helps "pump" gas along the pipeline, and gives off air and noise pollution while doing so) in an African American neighborhood of Albany, Dougherty County, Georgia. The agency identified environmental-justice communities by looking at the demographics of census *tracts,* which are county subdivisions created to organize census data. The neighborhood in question is a 100% African American census *block,* an even smaller census subdivision, but because it sits in the midst of a majority-white census tract, FERC did not designate it an environmental-justice community. Sierra Club's objection to this omission elevates form over substance. The goal of an environmental-justice analysis is satisfied if an agency recognizes and discusses a project's impacts on predominantly-minority communities, even if it does not formally label each such community an "environmental justice community." FERC *did* recognize the existence and demographics of the neighborhood in question, and discussed the neighborhood extensively. The EIS listed community features, including subdivisions, schools, and churches, along with their distances from the proposed compressor station, and explained that the station's noise and air-quality effects on these locations were expected to remain within acceptable limits.

More persuasive is Sierra Club's argument that FERC disregarded the extent to which Dougherty County is already overburdened with pollution sources. A letter to FERC from four members of Georgia's congressional delegation cites the grim statistics: southern Dougherty County has 259 hazardous-waste facilities, 78 air-polluting facilities, 20 toxic-polluting facilities, and 16 water-polluting facilities. The EIS did not mention these existing polluters in its discussion of Dougherty County. Sierra Club thus argues that FERC inadequately considered the project's "cumulative impacts," that is, its effects taken in combination with existing environmental hazards in the same area. *See* 40 C.F.R. § 1508.7; *Del. Riverkeeper,* 753 F.3d at 1319-20.

Perhaps FERC could have said more, but the discussion it undertook of the cumulative impacts of the proposed route fulfilled NEPA's goal of guiding informed decisionmaking. The EIS acknowledged that the Sabal Trail project will generate air pollution and noise pollution in Albany, and it projected cumulative levels of both of these types of pollution from all sources in the vicinity of the compressor station, finding that both would remain below harmful thresholds.[7] We are sensitive to 1371\*1371 Sierra Club's broader contention that it is unjust to locate a polluting facility in a community that already has a high concentration of polluting facilities, even if those older facilities produce pollution of a different type or in different locations. We note, however, that FERC took seriously commenters' concerns about locating Sabal Trail facilities in Dougherty County. The agency reopened the comment period on the EIS to seek input on relocating the compressor station, and then actually secured Sabal Trail's agreement to relocate the station, moving it in part to mitigate effects on environmental-justice communities. The EIS also considered four route alternatives proposed by Sierra Club and its fellow environmental petitioners that would have partially or completely avoided Albany, but rejected them all, mainly on the ground that they would have had a greater overall impact on residences and populated areas.

To sum up, the EIS acknowledged and considered the *substance* of all the concerns Sierra Club now raises: the fact that the Southeast Market Pipelines Project will travel primarily through low-income and minority communities, and the impact of the pipeline on the city of Albany and Dougherty County in particular. The EIS also laid out a variety of alternative approaches with potential to address those concerns, including those proposed by petitioners, and explained why, in FERC's view, they would do more harm than good. The EIS also gave the public and agency decisionmakers the qualitative and quantitative tools they needed to make an informed choice for themselves. NEPA requires nothing more.

**B**

It's not just the journey, though, it's also the destination. All the natural gas that will travel through these pipelines will be going somewhere: specifically, to power plants in Florida, some of which already exist, others of which are in the planning stages. Those power plants will burn the gas, generating both electricity and carbon dioxide. And once in the atmosphere, that carbon dioxide will add to the greenhouse effect, which the EIS describes as "the primary contributing factor" in global climate change. J.A. 915. The next question before us is whether, and to what extent, the EIS for this pipeline project needed to discuss these "downstream" effects of the pipelines and their cargo. We conclude that at a minimum, FERC should have estimated the amount of power-plant carbon emissions that the pipelines will make possible.

An agency conducting a NEPA review must consider not only the direct effects, but also the *indirect* environmental effects, of the project under consideration. *See* 40 C.F.R. § 1502.16(b). "Indirect effects" are those that "are caused by the [project] and are later in time or farther removed in distance, but are still reasonably foreseeable." *Id.* § 1508.8(b). The phrase "reasonably foreseeable" is the key here. Effects are reasonably foreseeable if they are "sufficiently likely to occur that a person of ordinary prudence would take [them] into account in reaching a decision." *EarthReports, Inc. v. FERC,* 828 F.3d 949, 955 (D.C. Cir. 2016) (citation omitted).

What are the "reasonably foreseeable" effects of authorizing a pipeline that will 1372\*1372 transport natural gas to Florida power plants? First, that gas will be burned in those power plants. This is not just "reasonably foreseeable," it is the project's entire purpose, as the pipeline developers themselves explain. *See* Intervenor Br. 4-5 (explaining that the project "will provide capacity to transport natural gas to the electric generating plants of two Florida utilities"). It is just as foreseeable, and FERC does not dispute, that burning natural gas will release into the atmosphere the sorts of carbon compounds that contribute to climate change.

The pipeline developers deny that FERC would be the legally relevant cause of any power plant carbon emissions, and thus contend that FERC had no obligation to consider those emissions in its NEPA analysis. They rely on *Department of Transportation v. Public Citizen,* 541 U.S. 752, 124 S.Ct. 2204, 159 L.Ed.2d 60 (2004), a case involving the Federal Motor Carrier Safety Administration's development of safety standards for Mexican trucks operating in the United States. The agency had proposed those standards because the President planned to lift a moratorium on Mexican motor carriers operating in this country. These standards would require roadside inspections, which had the potential to create adverse environmental effects. The agency's EIS discussed the effects of these roadside inspections, but Public Citizen contended that the EIS was also required to address the environmental effects of increased truck traffic between the two countries. *See id.* at 765, 124 S.Ct. 2204.

The Supreme Court sided with the agency. The Court noted that the agency would have no statutory authority to exclude Mexican trucks from the United States once the President lifted the moratorium; it would only have power to set safety rules for those trucks. *See id.* at 766-67, 124 S.Ct. 2204. And because the agency could not exclude Mexican trucks from the United States, it would have no reason to gather data about the environmental harms of admitting them. The purpose of NEPA is to help agencies and the public make informed decisions. But when the agency has no *legal* power to prevent a certain environmental effect, there is no decision to inform, and the agency need not analyze the effect in its NEPA review. *See id.* at 770, 124 S.Ct. 2204.

We recently applied the *Public Citizen* rule in three challenges to FERC decisions licensing liquefied natural gas (LNG) terminals. *See Sierra Club v. FERC* (*Freeport*), 827 F.3d 36 (D.C. Cir. 2016); *Sierra Club v. FERC* (*Sabine Pass*), 827 F.3d 59 (D.C. Cir. 2016); *EarthReports, Inc. v. FERC,* 828 F.3d 949 (D.C. Cir. 2016). Companies can export natural gas from the United States through an LNG terminal, but such natural gas exports require a license from the Department of Energy. *See Freeport,* 827 F.3d at 40. They also require physical upgrades to a terminal's facilities. The Department of Energy has delegated to FERC the authority to license those upgrades. *See id.* A question presented to us in all of these cases was whether FERC, in licensing physical upgrades for an LNG terminal, needed to evaluate the climate-change effects of exporting natural gas. Relying on *Public Citizen,* we answered no in each case. FERC had no legal authority to consider the environmental effects of those exports, and thus no NEPA obligation stemming from those effects. *See Freeport,* 827 F.3d at 47; *accord Sabine Pass,* 827 F.3d at 68-69; *EarthReports,* 828 F.3d at 956.

An agency has no obligation to gather or consider environmental information if it has no statutory authority *to act on that information.* That rule was the touchstone of *Public Citizen, see* 541 U.S. at 767-68, 124 S.Ct. 2204, and it distinguishes this 1373\*1373 case from the LNG-terminal trilogy. Contrary to our dissenting colleague's view, our holding in the LNG cases was not based solely on the fact that a second agency's approval was necessary before the environmental effect at issue could occur.[8] Rather, *Freeport* and its companion cases rested on the premise that FERC had *no legal authority to prevent* the adverse environmental effects of natural gas exports. *See Freeport,* 827 F.3d at 47.

This raises the question: what did the *Freeport* court mean by its statement that FERC could not prevent the effects of exports? After all, FERC *did* have legal authority to deny an upgrade license for a natural gas export terminal. *See Freeport,* 827 F.3d at 40-41. And without such an upgrade license, neither gas exports nor their environmental effects could have occurred.

The answer must be that FERC was forbidden to rely on the effects of gas exports *as a justification for* denying an upgrade license. *Cf. Motor Vehicle Mfrs. Ass'n of U.S. v. State Farm Mut. Auto. Ins. Co.,* 463 U.S. 29, 43, 103 S.Ct. 2856, 77 L.Ed.2d 443 (1983) (explaining that an agency acts arbitrarily and capriciously if it makes a decision based on "factors which Congress had not intended it to consider"). The holding in *Freeport,* then, turned not on the question "What activities does FERC regulate?" but instead on the question "What factors can FERC consider when regulating in its proper sphere?" In the LNG cases, FERC was acting not on its own statutory authority but under a narrow delegation from the Department of Energy. *See Freeport,* 827 F.3d at 40-41. Thus, the agency would have acted unlawfully had it refused an upgrade license on grounds that it did not have delegated authority to consider. *See State Farm,* 463 U.S. at 43, 103 S.Ct. 2856.

Here, FERC is not so limited. Congress broadly instructed the agency to consider "the public convenience and necessity" when evaluating applications to construct and operate interstate pipelines. *See* 15 U.S.C. § 717f(e). FERC will balance "the public benefits against the adverse effects of the project," *see Minisink Residents for Envtl. Pres. & Safety v. FERC,* 762 F.3d 97, 101-02 (D.C. Cir. 2014) (internal quotation marks omitted), including adverse environmental effects, *see Myersville Citizens for a Rural Cmty. v. FERC,* 783 F.3d 1301, 1309 (D.C. Cir. 2015). Because FERC could deny a pipeline certificate on the ground that the pipeline would be too harmful to the environment, the agency is a "legally relevant cause" of the direct and indirect environmental effects of pipelines it approves. *See Freeport,* 827 F.3d at 47. *Public Citizen* thus did not excuse FERC from considering these indirect effects.[9]

FERC next raises a practical objection, arguing that it is impossible to 1374\*1374 know exactly what quantity of greenhouse gases will be emitted as a result of this project being approved. True, that number depends on several uncertain variables, including the operating decisions of individual plants and the demand for electricity in the region. But we have previously held that NEPA analysis necessarily involves some "reasonable forecasting," and that agencies may sometimes need to make educated assumptions about an uncertain future. *See Del. Riverkeeper,* 753 F.3d at 1310. Indeed, FERC has already estimated how much gas the pipelines will transport: about one million dekatherms (roughly 1.1 billion cubic feet) per day. The EIS gave no reason why this number could not be used to estimate greenhouse-gas emissions from the power plants, and even cited a Department of Energy report that gives emissions estimates per unit of energy generated for various types of plant.

We conclude that the EIS for the Southeast Market Pipelines Project should have either given a quantitative estimate of the downstream greenhouse emissions that will result from burning the natural gas that the pipelines will transport or explained more specifically why it could not have done so. As we have noted, greenhouse-gas emissions are an indirect effect of authorizing this project, which FERC could reasonably foresee, and which the agency has legal authority to mitigate. *See* 15 U.S.C. § 717f(e). The EIS accordingly needed to include a discussion of the "significance" of this indirect effect, *see* 40 C.F.R. § 1502.16(b), as well as "the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions," *see WildEarth Guardians,* 738 F.3d at 309 (quoting 40 C.F.R. § 1508.7).

Quantification would permit the agency to compare the emissions from this project to emissions from other projects, to total emissions from the state or the region, or to regional or national emissions-control goals. Without such comparisons, it is difficult to see how FERC could engage in "informed decision making" with respect to the greenhouse-gas effects of this project, or how "informed public comment" could be possible. *See Nevada,* 457 F.3d at 93; *see also WildEarth Guardians,* 738 F.3d at 309 (accepting an agency's contention that the "estimated level of [greenhouse-gas] emissions can serve as a reasonable proxy for assessing potential climate change impacts, and provide decision makers and the public with useful information for a reasoned choice among alternatives").

We do not hold that quantification of greenhouse-gas emissions is required *every* time those emissions are an indirect effect of an agency action. We understand that in some cases quantification may not be feasible. *See, e.g., Sierra Club v. U.S. Dep't of Energy,* 867 F.3d 189, 202, No. 15-1489, 2017 WL 3480702 (D.C. Cir. Aug. 15, 2017). But FERC has not provided a satisfactory explanation for why this is such a case. We understand that "emission estimates would be largely influenced by assumptions rather than direct parameters about the project," *see* J.A. 916, but some educated assumptions are inevitable in the NEPA process, *see Scientists' Inst. for Pub. Info. v. Atomic Energy Comm'n,* 481 F.2d 1079, 1092 (D.C. Cir. 1973). And the effects of assumptions on estimates can be checked by disclosing those assumptions so that readers can take the resulting estimates with the appropriate amount of salt. *See WildEarth Guardians,* 738 F.3d at 309 (approving an EIS that took this approach).

Nor is FERC excused from making emissions estimates just because the 1375\*1375 emissions in question might be partially offset by reductions elsewhere. We thus do not agree that the EIS was absolved from estimating carbon emissions by the fact that some of the new pipelines' transport capacity will make it possible for utilities to retire dirtier, coal-fired plants. The effects an EIS is required to cover "include those resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial." 40 C.F.R. § 1508.8. In other words, when an agency thinks the good consequences of a project will outweigh the bad, the agency still needs to discuss both the good and the bad. In any case, the EIS itself acknowledges that only "portions" of the pipelines' capacity will be employed to reduce coal consumption. *See* J.A. 916. An agency decisionmaker reviewing this EIS would thus have no way of knowing whether total emissions, on net, will be reduced or increased by this project, or what the degree of reduction or increase will be. In this respect, then, the EIS fails to fulfill its primary purpose.

We also recognize that the power plants in question will be subject to "state and federal air permitting processes." J.A. 917. But even if we assume that power plants' greenhouse-gas emissions will be subject to regulation in the future, *see* Exec. Order No. 13,783, § 4(a), 82 Fed. Reg. 16,093, 16,095 (Mar. 28, 2017) (instructing the EPA administrator to consider "whether to revise or withdraw" federal regulation of these emissions), the existence of permit requirements overseen by another federal agency or state permitting authority cannot substitute for a proper NEPA analysis. *See Calvert Cliffs' Coordinating Comm. v. Atomic Energy Comm'n,* 449 F.2d 1109, 1122-23 (D.C. Cir. 1971). In any event, FERC quantified the project's expected emissions of other air pollutants, despite the fact that the project will presumably comply with the requirements of the Clean Air Act and state air-pollution laws.

Our discussion so far has explained that FERC must either quantify and consider the project's downstream carbon emissions or explain in more detail why it cannot do so. Sierra Club proposes a further analytical step. The EIS might have tried to link those downstream carbon emissions to particular climate impacts, like a rise in the sea level or an increased risk of severe storms. The EIS explained that there is no standard methodology for making this sort of prediction. *Cf. WildEarth Guardians,* 738 F.3d at 309 ("[C]urrent science does not allow for the specificity demanded" by environmental challengers.). In its rehearing request, Sierra Club asked FERC to convert emissions estimates to concrete harms by way of the Social Cost of Carbon. This tool, developed by an interagency working group, attempts to value in dollars the long-term harm done by each ton of carbon emitted. But FERC has argued in a previous EIS that the Social Cost of Carbon is not useful for NEPA purposes, because several of its components are contested and because not every harm it accounts for is necessarily "significant" within the meaning of NEPA. *See EarthReports,* 828 F.3d at 956. We do not decide whether those arguments are applicable in this case as well, because FERC did not include them in the EIS that is now before us. On remand, FERC should explain in the EIS, as an aid to the relevant decisionmakers, whether the position on the Social Cost of Carbon that the agency took in *EarthReports* still holds, and why.

[alterative claims deleted]

VI

The petition for review in No. 16-1329 is granted. The orders under review are vacated and remanded to FERC for the preparation of an environmental impact statement that is consistent with this opinion. The petition for review in No. 16-1387 is denied.

*So ordered.*

BROWN, Circuit Judge, concurring in part and dissenting in part:

I join today's opinion on all issues save the Court's decision to vacate and remand the pipeline certificates on the issue of downstream greenhouse emissions. Case law is clear: When an agency "`has no 1380\*1380 ability to prevent a certain effect due to' [its] `limited statutory authority over the relevant action[ ],' then that action `cannot be considered a legally relevant cause'" of an indirect environmental effect under the National Environmental Policy Act ("NEPA"). *Sierra Club (Freeport) v. FERC,* 827 F.3d 36, 47 (D.C. Cir. 2016) (quoting *Dep't of Transp. v. Pub. Citizen,* 541 U.S. 752, 770, 124 S.Ct. 2204, 159 L.Ed.2d 60 (2004)). Thus, when the occurrence of an indirect environmental effect is contingent upon the issuance of a license from a separate agency, the agency under review is not required to address those indirect effects in its NEPA analysis. Although this case seems indistinguishable from earlier precedent, the Court now insists the action taken by the Federal Energy Regulatory Commission ("FERC" or "the Commission") is the cause of an environmental effect, even though the agency has no authority to prevent the effect. *But see Pub. Citizen,* 541 U.S. at 767, 124 S.Ct. 2204 (holding "but for" causation is insufficient to make an agency responsible for a particular effect under NEPA). More significantly, today's opinion completely omits any discussion of the role Florida's state agencies play in the construction and expansion of power plants within the state— a question that should be dispositive. Because the Court's holding is legally incorrect and contravenes our duty to examine all arguments presented, I respectfully dissent.

When examining a NEPA claim, our role is limited to ensuring the relevant agency took a "hard look at the environmental consequences" of its decisions and "adequately considered and disclosed the environmental impact of its actions." *Balt. Gas & Elec. Co. v. Nat. Res. Def. Council,* 462 U.S. 87, 97-98, 103 S.Ct. 2246, 76 L.Ed.2d 437 (1983). We examine the agency's determinations under the "deferential rule of reason," which governs which environmental impacts the agency must discuss and the "extent to which it must discuss them." *WildEarth Guardians v. Jewell,* 738 F.3d 298, 310 (D.C. Cir. 2013). FERC thus has broad discretion to determine "whether and to what extent to [discuss environmental impacts] based on the usefulness of any new potential information to [its] decisionmaking process." *Pub. Citizen,* 541 U.S. at 767, 124 S.Ct. 2204. Here, FERC declined to engage in an in-depth examination of downstream greenhouse gas emissions because there is no causal relationship between approval of the proposed pipelines and the downstream greenhouse emissions; and, even if a causal relationship exists, any additional analysis would not meaningfully contribute to its decisionmaking. Both determinations were reasonable and entitled to deference.

Regarding causation, the Court is correct that NEPA requires an environmental analysis to include indirect effects that are "reasonably foreseeable," *Freeport,* 827 F.3d at 46, but it misunderstands what qualifies as reasonably foreseeable. The Court blithely asserts it is "not just the journey," it is "also the destination." Maj. Op. at 1371. In fact, NEPA is a procedural statute that *is all about* the journey. It compels agencies to consider all environmental effects likely to result from the project under review, but it "does *not* dictate particular decisional outcomes." *Sierra Club v. U.S. Army Corps of Engineers,* 803 F.3d 31, 37 (D.C. Cir. 2015) (emphasis added). The statute therefore "requires a reasonably close causal relationship between the environmental effect and the alleged cause" that is "akin to proximate cause in tort law." *Pub. Citizen,* 541 U.S. at 754, 767, 124 S.Ct. 2204. Thus, the fact that the Commission's action is a "but for" cause of an environmental effect is insufficient to make it responsible for a particular environmental effect. *Id.* Instead, the 1381\*1381 effect must be "sufficiently likely to occur that a person of ordinary prudence would take it into account in reaching a decision." *Freeport,* 827 F.3d at 47. There is a further caveat: An effect the agency is powerless to prevent does not fall within NEPA's ambit. Here, the Commission explained in its denial of rehearing that any "environmental effects resulting from end use emissions from natural gas consumption are generally neither caused by a proposed pipeline (or other natural gas infrastructure) project nor are they reasonably foreseeable consequences of our approval of an infrastructure project." JA 1330. FERC's conclusion is both logical and consistent with this Court's precedent. While the Court concludes FERC's approval of the proposed pipelines will be the cause of greenhouse gas emissions because a significant portion of the natural gas transported through the pipeline will be burned at power plants, *see* Maj. Op. at 1371, the truth is that FERC has no control over whether the power plants that will emit these greenhouse gases will come into existence or remain in operation.

…

## Footnotes

[4] Like petitioners, we refer to these two types of community collectively as "environmental-justice communities."

[5] Because FERC voluntarily performed an environmental-justice review, we need not decide whether Executive Order 12,898 is binding on FERC. *See Runway Expansion,* 355 F.3d at 689 (explaining that arbitrary-and-capricious analysis applies to every section of an EIS, even sections included solely at the agency's discretion).

[6] Sierra Club argues that the project will in fact have "high and adverse" impacts, but does so only in a brief and cursory fashion. *See CTS Corp. v. EPA,* 759 F.3d 52, 64 (D.C. Cir. 2014) (explaining that we need not address cursory arguments).

[7] FERC appropriately relied on EPA's national ambient air quality standards (NAAQS) as a standard of comparison for air-quality impacts. By presenting the project's expected emissions levels and the NAAQS standards side-by-side, the EIS enabled decisionmakers and the public to meaningfully evaluate the project's air-pollution effects by reference to a generally accepted standard. *See Runway Expansion,* 355 F.3d at 689 (explaining that in an environmental-justice analysis, the agency's "choice among reasonable analytical methodologies is entitled to deference").

[8] We also note that Florida Power & Light, which expects to be one of the pipelines' two primary customers, represented to FERC that "its commitments on Sabal Trail's and Florida Southeast's systems are to provide gas to existing natural gas-fired plants." Certificate Order ¶ 85, J.A. 1100. So even if the dissent were correct that Florida regulators' authority over power-plant construction excuses FERC from considering emissions from new or expanded power plants, that argument would not apply to the significant portion of these pipelines' capacity that is earmarked for *existing* plants.

[9] The dissent contends that if FERC refused to approve these pipelines, Florida utilities would find a way to deliver an equivalent amount of natural gas to the state regardless. *See* Dissenting Op. 1383. This argument, however, does not bear on the question whether FERC is legally authorized to consider downstream environmental effects when evaluating a Section 7 certificate application. In any case, the record suggests that there is no other viable means of delivering the amount of gas these pipelines propose to deliver. *See* J.A. 920-25.