December 19, 2016

Email copy to: NGSKMC-EIS@usbr.gov

NGS-KMC Project Manager,
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6150 West Thunderbird Road
Glendale, AZ 85306-4001

RE: Navajo Generating Station-Kayenta Mine Complex Draft Environmental Impact Statement Comments submitted by Grand Canyon Trust and National Parks and Conservation Association.

Dear Project Manager,

Thank you for the opportunity to comment on the U.S. Department of Interior/Bureau of Reclamation's Draft Environmental Impact Statement for the Navajo Generating Station-Kayenta Mine Complex (NGS-KMC) Project. These comments are submitted on behalf of the National Parks Conservation Association the Grand Canyon Trust.

The mission of the National Parks Conservation Association is to protect and enhance America's national parks for the use and enjoyment of present and future generations. Since NPCA was established in 1919, it has advocated for protection of the natural environment, including air quality, in and around the national parks and other federal lands. For many years, NPCA has worked to ensure that park polluting sources like Navajo Generating Station do not adversely impact park visitors and protected landscapes and airsheds at places including Grand Canyon National Park.

Founded in 1985, the Grand Canyon Trust is a non-profit organization with over 3,000 members. It is headquartered in Flagstaff, Arizona. The Trust's mission is "to protect and restore the canyon country of the Colorado Plateau – its spectacular landscapes, flowing rivers, clean air, diversity of plants and animals, and areas of beauty and solitude." For three decades the Trust has been an active stakeholder in the operations of Navajo Generating Station (NGS). These comments and recommendations are intended to identify Grand Canyon Trust's concerns as an affected party and to

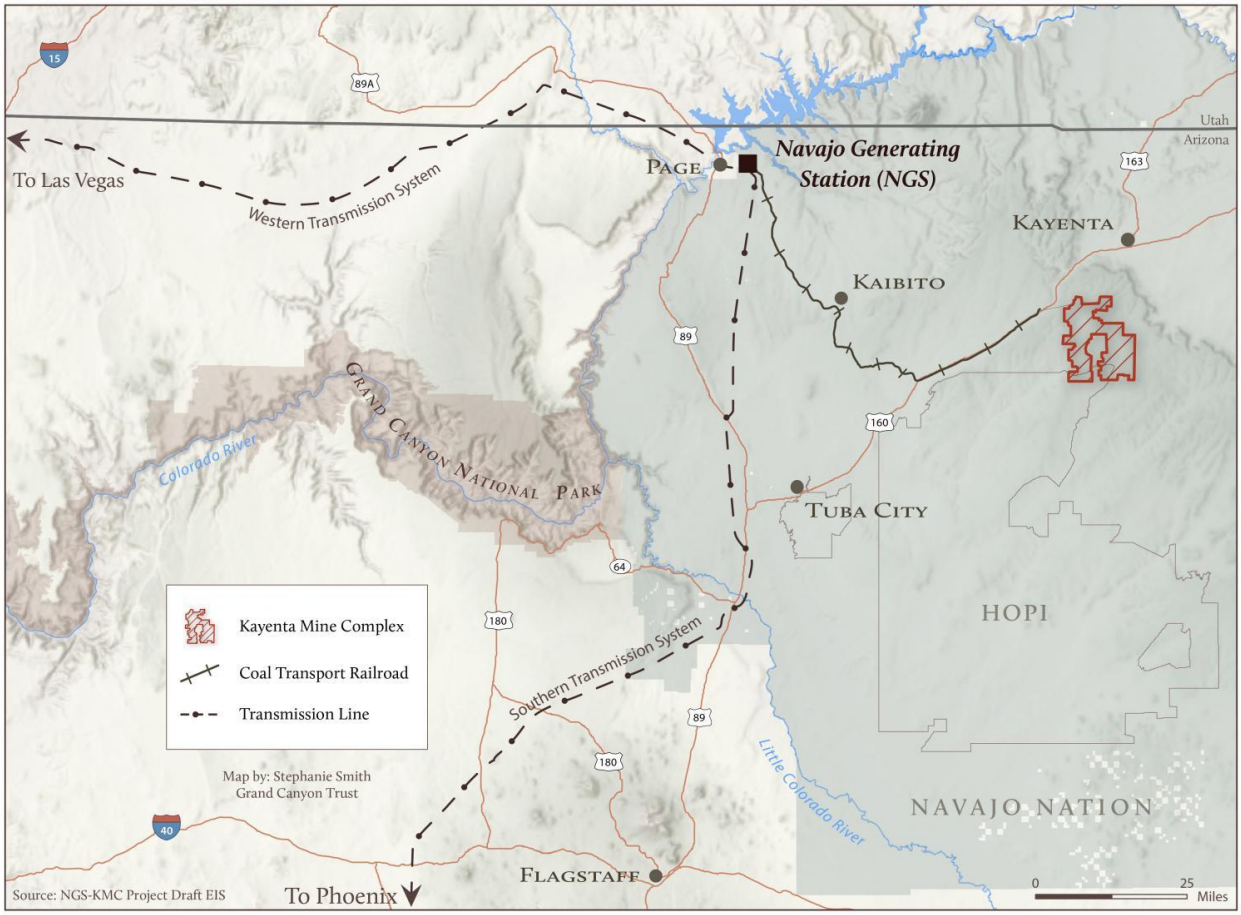
advocate to: 1) prevent NGS emissions from impairing visibility at the Grand Canyon and ten other National Parks and Wilderness Areas, 2) stop irreversible damage to water which is lifeblood to Grand Canyon's living communities, and 3) promote sustainable energy options that help to achieve economic self-determination and equity among Native American communities. Twenty-five years ago, the Grand Canyon Trust helped to negotiate an agreement to reduce sulfur emissions at Navajo Generating Station by more than 90 percent. That decision improved visibility at the Grand Canyon, sustained high-paying jobs for local residents, and produced cheap and reliable electricity for another 25 years. The Trust remains a steadfast advocate for clean air and water, cleaner energy options, and economic fairness as Reclamation considers the next 25 years of NGS and, ultimately, the retirement, reclamation, and replacement of the entire system of hydrologic, ergonomic, economic, and environmental relationships that the Final Environmental Impact Statement must evaluate.

January 19, 2009. **Photo of NGS looking southwest toward Grand Canyon National Park**. Please note that only two chimneys are releasing emissions, because the center burner was down for maintenance. The white puffs are water vapor. The brown plume (consisting of nitrates, heavy metals, and other toxic emissions) is drifting south and into the Grand Canyon. Because only two of the plant's three units were operating at the time, the photo simulates what the pollution plume would look like after implementing a plan cut emissions by one-third by closing one coal burner at the end of 2020. Photo credit: Ted Grussing.

NGS-KMC-CAP SYSTEM DESCRIPTION

Navajo Generating Station is the largest and dirtiest coal-fired power plant in the West. It was built during the early 1970s on land that is leased from the Navajo Nation and located about 20 miles north of Grand Canyon National Park, near Lake Powell and the high desert town of Page, Arizona.

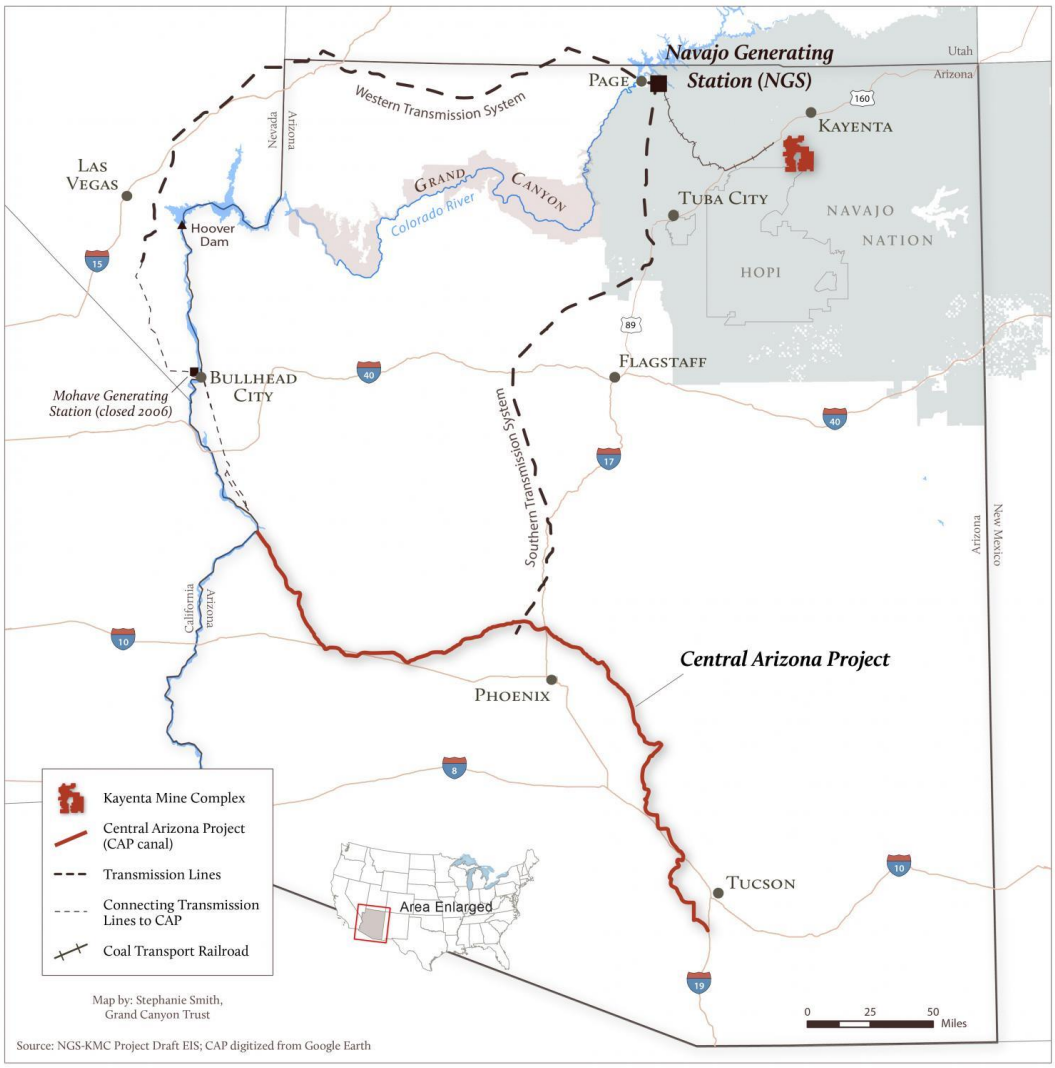
For more than four decades, NGS boilers have been burning a thousand tons of coal per hour to power three 750MW generators that deliver electricity to customers in California, Arizona, and Nevada. Starting in 1974, its three 700-foot smokestacks have dumped more than a half billion tons of climate-changing gasses into the earth's atmosphere. Every year, NGS releases millions of more tons of harmful pollutants into its surrounding air, land, and water. Its steam and cooling systems consume enough water pumped from Lake Powell to sustain a city of 50,000 people for a year. Its emissions impair visibility at nearby parks and wilderness areas. Methyl mercury, selenium, and other toxic emissions accumulate in surrounding ecosystems. People who live near the power plant are statistically more likely to suffer from respiratory disease.



Coal from the Kayenta Mine Complex is hauled 80 miles by electric train from Black Mesa to NGS. The KMC is located on Hopi and Navajo land. Thousands of residents were forced to abandon their aboriginal homeland to clear the way for Peabody Coal Company to strip-mine nearly 100,000 acres of land, permitted by the U.S. Department of the Interior, Bureau of Indian Affairs, and Office of Surface Mining Reclamation and Enforcement and leased by the Hopi and Navajo governments. Remaining residents who live near the strip mines have been breathing coal dust for more than a generation.

Many of their nearby wells and water sources have been depleted and contaminated by the coal processing infrastructure within the Kayenta Mine Complex.

The U. S. Department of the Interior receives 24.3 percent (547MW) of electricity generated by NGS. The power is delivered by Department of Energy owned transmission lines and substations to run 14 large pumps needed to lift 1.5 million acre feet of water uphill from the Colorado River through the 337-mile long Central Arizona Project (CAP) canal. The CAP and supporting reservoirs, land, and infrastructure are owned by the federal government. Revenues from the sale of "surplus" NGS electricity—electricity not needed for pumping water—repay part of CAP's capital cost, underwrite its operation, maintenance, and replacement costs, and feed a development fund that is used, in part, to minimize the cost of water for cities and southern Arizona tribes under a 2004 Water Rights Settlement.



To keep the NGS and Kayenta Mine Complex open for another 25 years, numerous federal leases and permits need to be renewed beginning in 2019. The Proposed Action described in the DEIS is to renew the expiring leases and permits in order to continue operating the NGS and Kayenta Mine Complex through the end of 2044.[1] A comprehensive environmental impact assessment of this complex system of federal infrastructure and obligations has not previously been completed under the National Environmental Policy Act (NEPA). There are a large number of interconnected actions that must be considered and--where possible—mitigated.

NEPA REQUIREMENTS

The Draft Environmental Impact Statement (DEIS) must fully disclose and assess environmental, economic, and cultural consequences that are currently occurring, evaluate decades of cumulative impacts, and weigh those against a reasonable set of alternatives to continue the system's operation and develop ways to mitigate impacts upon closure.

More importantly, federal agencies, "to the fullest extent possible," are to "[u]se the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment."[2] Federal law requires agencies to minimize damage to where we live.

Lastly, Reclamation must consider the consequences of deciding not to renew the leases and permits and must develop options for meeting federal commitments to communities that it caused to depend on this system and to those people who must endure its everlasting effects. A federal decision not to renew operating permits will have the same effect as a decision by Salt River Project and co-tenants to shut NGS for financial reasons. Reclamation must evaluate and mitigate a decision to retire and reclaim the NGS-KMC Complex—no matter when that occurs—as a pre-requisite to completing the Final Environmental Impact Statement and Record of Decision.

SPECIFIC COMMENTS AND RECOMMENDATIONS

A. The Proposed Action cannot be expected to achieve the project's stated purpose; therefore, the DEIS is inadequate and must be re-written.

"Reclamation's purpose for the Proposed Action is to secure, after 2019, a continuously available and reliable source of power and energy to operate the CAP pumps, which

[1] http://ngskmc-eis.net/about-the-eis/
[2] NEPA 40CFR§1500.2 http://energy.gov/sites/prod/files/NEPA-40CFR1500_1508.pdf

would be competitively priced with NGS and could be sold as surplus power, the proceeds of which would be deposited in the Lower Colorado River Basin Development Fund (Development Fund). Development Fund revenues are used to assist in repayment of CAP construction costs, and for the payment of fixed operation, maintenance, and replacement charges associated with the delivery of CAP water to Arizona Native American tribes and other statutory purposes."[3]

Reclamation applied this purpose—to generate surplus power at a competitive price—as a key criterion for eliminating alternatives. For example, Reclamation considered alternatives that could replace the entire federal share of NGS. But it concluded that building a new, combined-cycle natural gas plant, "…could result in power generation costs that would be higher than the reasonably foreseeable market price of power; therefore, this alternative likely would not be able to generate surplus power revenues. Because total federal replacement of NGS would not be able to generate surplus power revenues for deposit to the Development Fund, this alternative was not carried forward."

Under the Proposed Action (as well as with all of the alternatives), Reclamation assumes that NGS is the only viable source of competitively priced electricity that could be sold as surplus energy to generate funds for deposit into the Development Fund. But markets are changing. NGS's odds and ability to generate electricity at a competitive price are precipitously dipping.

The November, 2016 analysis by the National Renewable Energy Laboratory (NREL) concluded: "Electricity produced at NGS is currently more expensive than electricity purchased on the wholesale spot market. Price trends examined in this analysis suggest a turnaround might be years away, especially if natural gas prices remain low….The projections suggest that NGS could remain more expensive than power purchased at market prices—at least until 2018 if natural gas prices increase and possibly until 2025 if prices for natural gas and wholesale power remain low."[4]

NREL also noted that greater coordination among utilities could: "Reduce the ability to sell surplus power from NGS, because non-coal alternatives such as renewables and natural gas generation are likely to become more cost competitive and easier to manage."[5] Plus, it stated that "NGS costs are likely: an increase of nearly $3/MWh after 2019, when a new NGS site lease agreement with the Navajo Nation is scheduled to take effect, and an estimated $9.84/MWh increase in 2030 related to the installation of new NOx controls."[6] A pending decision by the 9th Circuit Court of Appeals could shorten this schedule for retrofitting NGS with the best available control technology or

[3] ES1.3 http://ngskmc-eis.net/wp-content/uploads/2016/09/draft-eis/__Executive_Summary.pdf
[4] Page *viii*: http://www.nrel.gov/docs/fy17osti/66506.pdf
[5] *Ibid*, page *xii*
[6] *Ibid*, page *xiii*

require it to curtail operations to cut NOx emissions in compliance with the Clean Air Act.

Under current and foreseeable market conditions and with scheduled cost increases, Navajo Generating Station will not produce electricity at a price that can be sold as "surplus." Currently, NGS is not producing electricity at a price that can assure the sale of surplus power to pay "for the delivery of CAP water to Arizona Native American tribes and other statutory purposes." Therefore, the Proposed Action is likely to fail to achieve the project's stated purpose because Reclamation assumes that NGS will generate electricity at a competitive price that can be sold as surplus energy until 2044. Also, none of the alternatives can be reasonably expected to achieve the project's stated purpose because they too rely on NGS as the sole source of "surplus power."

Because, in all likelihood, NGS would not generate surplus revenues for deposit to the Development Fund, the DEIS is inadequate. It fails to identify a proposed action and reasonable alternatives "…that are practical or feasible from [a] technical and economic standpoint and using common sense…." Therefore, the DEIS is "so inadequate as to preclude meaningful analysis, [and] the agency [must] prepare and circulate a revised draft of the [DEIS]."[7]

B. The proposed alternatives fail "to avoid or minimize adverse effects of these actions upon the quality of the human environment."[8]

Reclamation considered and eliminated a number of possible alternatives. Through comments received during the public scoping process, Reclamation organized and evaluated alternatives according to "three central themes" or objectives: "1) seek to minimize energy costs to the CAP; 2) explore renewable energy technology as an economically viable option; and 3) consider tribal socioeconomic impacts."[9]

Reclamation's objective to minimize CAP's costs has the effect of arbitrarily constraining consideration of alternatives[10] that would "minimize adverse effects of these actions upon the quality of the human environment," as required by NEPA.[11] It favors those who stand to benefit from CAP's cheap water rates, while it works against those who would benefit from cleaner air and water and a healthier environment.

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[7] NEPA 40CFR§1502.9(a) http://energy.gov/sites/prod/files/NEPA-40CFR1500_1508.pdf
[8] NEPA 40CFR§1500.2 http://energy.gov/sites/prod/files/NEPA-40CFR1500_1508.pdf
[9] ES1.4.2 http://ngskmc-eis.net/wp-content/uploads/2016/09/draft-eis/__Executive_Summary.pdf
[10] "Seek" is an active verb; "explore" and "consider" are passive. Seeking to minimize CAP costs filtered out several reasonable options to invest in a clean energy transition before NGS is retired.
[11] NEPA 40CFR§1500.2 http://energy.gov/sites/prod/files/NEPA-40CFR1500_1508.pdf

Reclamation's decision to minimize the cost of electricity to pump water to Phoenix and Tucson and to renew permits to mine and burn coal for 25 more years is unfair to people who live near the power plant and strip-mine and offensive to the thousands of people it rendered homeless.

C. We recommend that Reclamation require a reasonable rate increase for CAP customers.

The new rate schedule for Central Arizona Project customers should better reflect true market costs for water and cover some of the capital costs for constructing cleaner energy options. The rate increase should also be used for closure and replacement costs and for mitigating the economic impact to Native communities who depend on NGS for their economic well-being. If CAP is to continue operating, its customers must share some of the transition costs. Consider it a down payment to assure a sustainable supply of clean water for city dwellers, reservation residents, and future generations. The clean air that comes with it will be a collateral benefit shared by all. To minimize environmental impacts, as NEPA requires, Reclamation must increase what it charges CAP to cover the increasing costs of pumping water uphill to Phoenix and Tucson.

D. Reclamation's revision to the DEIS should include a new purpose and set of reasonable alternatives for meaningful analysis and consideration.

The current NGS-KMC DEIS is inadequate. The stated purpose and need is so narrow that it unduly limits the universe of alternatives that could satisfy it. We ask that Reclamation develop a new DEIS for a NGS-KMC-CAP system transition plan. It should evaluate federal assets and liabilities and identify at least one set of alternatives that seek: 1) to develop cleaner energy and sustainable water supplies for a secure economy, while adapting to hotter and dryer conditions due to climate change, and 2) to minimize economic impacts to Native American people who currently benefit from revenues generated by NGS, but who have also sacrificed and survived so much.

A similar set of long-term goals was established on January 4, 2013 by the Department of the Interior, Department of Energy, and the Environmental Protection Agency.[12] It committed these agencies to work together with an inclusive, technical working group of stakeholders in developing "clean energy options for Navajo Generating Station….[and] a roadmap for accomplishing these goals …consistent with Federal trust responsibilities to federally recognized Indian tribes in the region." More specifically, it committed to "producing clean, affordable and reliable power, affordable and sustainable water supplies, and sustainable economic development, while minimizing

[12] JOINT FEDERAL AGENCY STATEMENT REGARDING NAVAJO GENERATING STATION, 2013 https://www.ngspower.com/environment/pdfx/studies/Jan2013/DOI_DOE_EPA_Statement_NGS.pdf

negative impacts on those who currently obtain significant benefits from NGS, including tribal nations."

Work on evaluating transition strategies was well underway at NREL[13] by the time three federal agencies committed to creating a transition plan. They were responding, in part, to recommendations to consider clean energy options for NGS, first submitted by the Grand Canyon Trust in 2010.[14] The recently released NREL report to Reclamation is the latest installment of this ongoing effort. It is intended "to provide a credible, thorough description of baseline descriptions that might affect federal decisions regarding NGS."[15]

NREL's report also notes: "Even though wholesale power prices have been low, the costs of utility-scale solar and wind power have continued to decline. Arizona has some of the most productive solar resource potential in the United States, which significantly improves the amount of energy generated for every dollar of capital investment."[16]

Reclamation's too narrowly defined purpose ruled out a number of reasonable alternatives, including "distributed power generation along the CAP system."[17] That option could become more cost effective if Reclamation considered the previously permitted CAP corridor and transmission space as capital assets in its new evaluation of affordable and reasonable solutions. Additional construction costs for such a "CAP solar system" could be raised through co-tenancy and ownership options with Native nations and through long-term power purchase agreements with state, tribal and federal electrical loads in the CAP service area.

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The federal government is a large owner of Navajo Generating Station and the sole owner of the Central Arizona Project. It has a trust responsibility to Native nations and is obligated under the National Environmental Policy Act to consider reasonable alternatives in all major decisions. In the NGS-KMC DEIS, it must consider cost-effective options and balance the need to reduce NGS pollution with the long-term needs of NGS-affected communities and CAP customers. These alternatives should

[13] Navajo Generating Station and Clean-Energy Alternatives: Options for Renewables, 2012 http://www.nrel.gov/docs/fy12osti/54706.pdf

[14] Clean Energy Options for Navajo Generating Station, 2010 (revised 2013) http://www.grandcanyontrust.org/sites/default/files/resources/Clean_Energy_Options_Navajo_Generating_Station.pdf

[15] Page *iv*: http://www.nrel.gov/docs/fy17osti/66506.pdf

[16] *Ibid*

[17] DEIS ES-9 http://ngskmc-eis.net/wp-content/uploads/2016/09/draft-eis/__Executive_Summary.pdf

include replacing electricity, jobs, and revenues derived from coal with clean energy alternatives.

Thank you for considering our comments and recommendations.

Sincerely,

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