



NFEnergía
puerto rico

NFEnergía LLC

San Juan Micro-Fuel Handling Facility

**Resource Report 10
Alternatives**

**Docket No.
CP21-____-000**

September 15, 2021

NFEnergía LLC
SAN JUAN MICRO-FUEL HANDLING FACILITY
RESOURCE REPORT 10—ALTERNATIVES

Minimum Filing Requirements for Environmental Reports:	Addressed in Section:
<p>1. Discuss the “no-action” alternative and the potential for accomplishing the proposed objectives through the use of other systems and/or energy conservation. Provide an analysis of the relative environmental benefits and costs for each alternative.</p>	10.2
<p>2. Describe alternative routes or locations considered for each facility during the initial screening for the project.</p> <p>(i) For alternative routes considered in the initial screening for the project but eliminated, describe the environmental characteristics of each route or site, and the reasons for rejecting it. Identify the location of such alternatives on maps of sufficient scale to depict their location and relationship to the proposed action, and the relationship of the pipeline to existing rights-of-way.</p> <p>(ii) For alternative routes or locations considered for more in-depth consideration, describe the environmental characteristics of each route or site and the reasons for rejecting it. Provide comparative tables showing the differences in environmental characteristics for the alternative and proposed action. The location of any alternatives in this paragraph shall be provided on maps equivalent to those required in paragraph (c)(2) of this section.</p>	Not Applicable

NFEnergía LLC
SAN JUAN MICRO-FUEL HANDLING FACILITY
RESOURCE REPORT 10—ALTERNATIVES

TABLE OF CONTENTS

10.0	RESOURCE REPORT 10—ALTERNATIVES.....	10-1
10.1	PURPOSE	10-1
10.2	NO-ACTION ALTERNATIVE	10-2
10.3	OTHER ALTERNATIVES.....	10-3
10.4	REFERENCES	10-4

ACRONYMS AND ABBREVIATIONS

FERC	Federal Energy Regulatory Commission
LNG	liquefied natural gas
MFH Facility	San Juan Micro-Fuel Handling Facility
NFEnergía	NFEnergía LLC
PREPA	Puerto Rico Electric Power Authority

NFEnergía LLC
SAN JUAN MICRO-FUEL HANDLING FACILITY
RESOURCE REPORT 10—ALTERNATIVES

10.0 RESOURCE REPORT 10—ALTERNATIVES

NFEnergía LLC (“NFEnergía”) is seeking authorization from the Federal Energy Regulatory Commission (“FERC”) under Section 3 of the Natural Gas Act to continue operating the San Juan Micro-Fuel Handling Facility (“MFH Facility”), a liquefied natural gas (“LNG”) import and regasification facility. The MFH Facility is located on approximately 6.1 paved and fenced acres of an industrial area at Wharves A and B of the Puerto de San Juan (Port of San Juan), Puerto Rico, which is ideally situated among existing industrial uses in the north of Puerto Rico where it can supply power generation sources serving nearby load centers using minimal additional infrastructure. To operate the MFH Facility, “pocket-sized” LNG vessels (also called “shuttle vessels”) bring LNG into the San Juan Harbor where the LNG is transferred from the shuttle vessel to a non-jurisdictional floating storage unit vessel that is semi-permanently moored adjacent to the MFH Facility site. The floating storage unit transfers LNG onshore where certain quantities remain liquefied and are transloaded onto trucks for over-the-road delivery to end users and certain quantities are regasified and made available to Units 5 and 6 of the adjacent San Juan Power Plant via a short, 10-inch diameter segment of power plant piping. The MFH Facility has a regasification capacity of 130 million standard cubic feet per day and a truck loading capacity of 87.52 million standard cubic feet per day.

NFEnergía initially developed the MFH Facility to serve its commercial customers via a truck loading operation for distribution of LNG for regasification and use at behind-the-fence power generation facilities across Puerto Rico—typically multinational companies with manufacturing operations. In July 2018, Puerto Rico Electric Power Authority (“PREPA”) issued a request for proposals to retrofit Units 5 and 6 of the San Juan Power Plant to enable dual-fuel capability and to supply PREPA with natural gas. NFEnergía participated in that competitive process and was chosen as the successful bidder. PREPA and NFEnergía entered into a contract to effectuate the award in March 2019 and the MFH Facility began operating in March 2020 and became fully operational in May 2020.

FERC’s National Environmental Policy Act review process requires that an applicant submit an Environmental Report consisting of up to 13 individual resource reports. This resource report is consistent with and meets or exceeds all applicable FERC filing requirements. A checklist showing the status of FERC’s filing requirements for Resource Report 10 (18 Code of Federal Regulations § 380.12) is included before the table of contents.

Resource Report 10 describes the MFH Facility’s purpose and the environmental, economic, technological, and procedural viability of alternatives considered in operating the MFH Facility. The primary objective in evaluating alternatives is to avoid, minimize, and, if necessary, mitigate adverse environmental effects and meet NFEnergía’s gas delivery needs. The alternatives considered include the no-action alternative and other system and aboveground facility alternatives.

10.1 Purpose

NFEnergía seeks to continue operation of the MFH Facility to meet existing demand for imported natural gas for delivery to Puerto Rico’s commercial and utility customers. Puerto Rico

has historically experienced fuel diversity and energy supply issues¹, high electricity rates², and the air quality in the San Juan region is above the Environmental Protection Agency's National Ambient Air Quality Standards for sulfur dioxide. The MFH Facility helps meet fuel supply obligations for gas-fired electric generation that improves grid stability, supports the efforts of the PREPA to reduce electricity rates for its customers, and enables improvements in public health and air quality. Specifically, the MFH Facility is needed to enable the continued import, processing and distribution of natural gas to meet the essential needs of the traditionally underserved market in Puerto Rico. Additional details on the purpose and need of continued operations of the MFH Facility are provided in Resource Report 1.

10.2 NO-ACTION ALTERNATIVE

Under the no-action alternative, the MFH Facility would no longer be allowed to operate. Natural gas is a cheaper and cleaner burning fuel than diesel and fuel oil. Without the MFH Facility operating, the adjacent San Juan Power Plant and other commercial users who rely on natural gas deliveries from the MFH Facility would be required to return to using diesel or fuel oil to generate electricity and to serve other energy needs, resulting in increased costs of electricity generation and increased air emissions, including sulfur dioxide air emissions that would exacerbate the area's non-attainment status under the National Ambient Air Quality Standards. Under the no-action alternative, NFEnergía's environmental and economic benefits described above and throughout this application will not be realized.

If the MFH Facility were no longer allowed to operate, the negative and beneficial environmental impacts associated with its operation would cease to occur. While the MFH Facility's operations result in some negligible to minor impacts, there are more far more substantive environmental and economic benefits to its operation. In particular, without operation of the MFH Facility, the substantial sulfur dioxide emission reductions achieved at PREPA (which aids in improving the air quality in the San Juan non-attainment area) would cease and PREPA would revert to operating Units 5 and 6 of the San Juan Power Plant using diesel fuel.

Further, because the no-action alternative would not satisfy the purpose and need, it is not a reasonable alternative.

Ongoing operations of the MFH Facility include NFEnergía implementing measures discussed in this application to avoid, minimize, and mitigate environmental and landowner impacts associated with operation of the MFH Facility. With these measures, potential minor negative effects are substantially outweighed by the substantive benefits realized by the continued operation of the MFH Facility.

¹ Based on information from the United States Energy Information Administration, almost three-fourths of the energy used in Puerto Rico comes from petroleum products, which are all imported. Puerto Rico's largest generating plants are on the south side of the island, while the largest population concentrations are in the north, making the system dependent on its transmission and distribution lines. In September 2017, Hurricanes Irma and Maria made landfall and destroyed much of Puerto Rico's electricity transmission and distribution infrastructure. In January 2020, a 6.4 magnitude earthquake struck Puerto Rico and left two-thirds of its residents without power. The earthquakes significantly damaged Puerto Rico's two largest natural gas-fired power plants (United States Energy Information Administration, 2020b).

² From 2015 to 2019, Puerto Rico energy customers paid an average of 20.98 cents per Kilowatt-hour (United States Energy Information Administration, 2021). In comparison, in the contiguous United States, energy customers paid an average of 10.45 cents per Kilowatt-hour over the same time period (United States Energy Information Administration, 2020a).

10.3 Other Alternatives

The MFH Facility is constructed and currently in operation. As NFEnergía is seeking authorization from FERC to continue to operate its existing facility, the analysis of other siting, layout, or natural gas systems is not applicable. In particular, there are no system alternatives to the operation of the existing facility that can meet the purpose and need of the MFH Facility. Nor are there any reasonable alternative sites for aboveground facilities when siting and construction activities are outside the scope and not part of FERC's purpose and need in acting on NFEnergía's application for a certificate to operate the existing MFH Facility.

10.4 References

United States Energy Information Administration. 2020a. Monthly Energy Review December 2020. Available online at: <https://www.eia.gov/totalenergy/data/monthly/archive/00352012.pdf>. Accessed: June 30, 2021.

United States Energy Information Administration. 2020b. Puerto Rico Territory Profile and Energy Estimates. November 19, 2020. Available online at: <https://www.eia.gov/state/analysis.php?sid=RQ>. Accessed: June 30, 2021.

United States Energy Information Administration. 2021. Electric Power Monthly with Data for April 2021. June 24, 2021. Available online at: <https://www.eia.gov/electricity/monthly/>. Accessed: June 30, 2021.