LS POWER GRID MID-ATLANTIC

2021 New Jersey Offshore Wind Option 2 Transmission Proposal

September 17, 2021

Clean Energy Gateway

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Introduction of Proposals

LS Power Grid Mid-Atlantic, LLC (LSPG) is pleased to provide six proposals to the New Jersey Board of Public Utilities (BPU) and PJM as transmission solution options to integrate offshore wind generation (OSW) into the New Jersey transmission system. [redacted]

- [redacted]

- A coordinated plan will minimize impacts to the community and environment while maximizing the amount of OSW that can be integrated as summarized in Table 2.

Table 2 Coordinated Plan Advantages

Coordinated Advantage	Discussion
Consolidate Onshore Corridors	Minimizes environmental and community impacts through a smaller footprint and avoiding repeated disturbances. [redacted]
Consolidate Shore Landings	Minimizes environmental and community impacts through a smaller footprint and avoiding repeated disturbances. Maximizes the OSW generation capability as viable shore landing locations that are constructible, environmentally viable, socially acceptable, and proximate to BOEM OSW lease areas are limited.
Consolidate Offshore Cables	Minimizes environmental impacts through a smaller footprint. [redacted]

- Solutions should be flexible to accommodate a wide range of OSW interconnection scenarios given flexibility provided by the BPU Solicitation 2 awards and likelihood that renewable energy goals will be expanded in New Jersey.
- Solutions should have a shore landing located between Manasquan and Long Branch.
  - The onshore transmission system in southern New Jersey is weak and unable to accommodate more [redacted] of OSW without significant upgrades. [redacted]
  - Areas north of [redacted]
- Solutions should place [redacted] This will minimize community and environmental impacts through [redacted] to the existing transmission system.
- Option 3 proposals (i.e., an offshore network) provide [redacted]

Option1B Proposals

[redacted]

Option 2 Proposal

[redacted]

[redacted]

I. Executive Summary

LS Power Grid Mid-Atlantic, LLC (LSPG) is pleased to provide this Proposal to the New Jersey Board of Public Utilities (BPU) and PJM for an offshore (Option 2) transmission solution to integrate offshore wind (OSW) into the New Jersey transmission system (the "Clean Energy Gateway" or "Project"). This Project is dependent upon selection of one of the onshore (Option 1B) transmission solutions proposed by LSPG.

The Clean Energy Gateway is a cost-effective and highly reliable networked AC solution capable of delivering up to [redacted] of OSW. The Project includes up to [redacted] offshore substations strategically located to provide efficient delivery of energy from OSW lease/call areas to Lighthouse Substation, which would be constructed as part of the LSPG Option 1B proposal. A network of [redacted]. The Project is modular to provide flexibility in implementation in up to three phases. Each phase can be constructed sequentially or simultaneously to accommodate a [redacted] The Clean Energy Gateway provides New Jersey with the opportunity to avoid substantial network upgrades and invest those dollars in a complete transmission solution to exceed its OSW goals.

The Clean Energy Gateway will be completed by LS Power, a New Jersey based company, who is [redacted] Cost certainty is provided [redacted]

[redacted]

Project Benefits

The Clean Energy Gateway provides a highly reliable and resilient design with storm-hardened substations and submarine redundant transmission paths to independently integrate 6,000 MW of new OSW. The Project is more cost effective, reliable, and efficient with lower implementation and operating risks, lower impacts to the environment and communities, and a longer operating lif [redacted] he primary benefits of the Clean Energy Gateway include:

- ✓ Enhanced reliability from the [redacted] that minimize OSW curtailment risk and increase New Jersey's transmission system resiliency;
- ✓ Flexibility and modularity to accommodate a wide range of OSW generator and/or offshore transmission system interconnections that have varying schedules to maximize OSW value;
- ✓ Ability to accommodate OSW exceeding state goals allowing New Jersey to efficiently increase its clean energy independence;
- ✓ Cost savings from [redacted];
- ✓ Minimized environmental, community, and tourism impacts (onshore and offshore) through [redacted]
- ✓ Reduced project-on-project risk by allowing transmission infrastructure to be planned and built in advance of the OSW awards;
- ✓ Improved competition in future OSW solicitations that will not be skewed by transmission and interconnection cost differences;

- ✓ Substantial state economic benefits from [redacted] he Project; and
- ✓ Ratepayer protection provided by a [redacted].

Cost and Cost Certainty

LSPG estimates the offshore component of the Project will cost $2.2 billion in 2021 dollars, or $2.5 billion in nominal year of occurrence dollars. These estimates include all costs necessary to implement and place the project in service including financing costs (AFUDC) and contingency. [redacted]

[redacted]

Constructability

[redacted]

[redacted]

[redacted]

[redacted]

Operations & Maintenance

The Clean Energy Gateway will be operated by LS Power using its certified, modern control centers that operate extra-high voltage transmission [redacted]

This proposal for the Clean Energy Gateway provides the BPU and New Jersey with a unique opportunity to solidify its path to a future of 100% clean energy by ensuring delivery of large quantities of OSW in a cost effective, reliable, and least impact manner. LSPG's rigorous and flexible design with firm commitments and thoughtful environmental and community protections guarantees the BPU a low risk solution to meet the State's OSW goal and provides value to New Jersey ratepayers. LSPG looks forward to the opportunity to partner with the BPU to provide a critical link to expanding New Jersey's clean energy economy.

II. Project Proposal Identification

Table 2-1 Proposal ID

Proposing Entity Name	LS Power Grid Mid-Atlantic, LLC[1]
Company ID	CNTLTM
Project Title	Clean Energy Gateway
PJM Proposal ID	594

About LS Power Grid Mid-Atlantic

LS Power Grid Mid-Atlantic, LLC ("LSPG") is a wholly owned subsidiary of LS Power formed to implement, own, and operate transmission infrastructure in New Jersey. LS Power is a New Jersey based transmission and power generation company that owns and manages one of the largest and most diverse independent power generation and transmission portfolios in the United States, which includes operating transmission and generation assets in New Jersey. [redacted]

Figure 2-1 LS Power Footprint

[redacted]

LS Power has been awarded seven new competitively solicited transmission projects (230, 345 and 500 kV) primarily under FERC Order 1000. A summary of LS Power's relevant transmission experience is provided in [redacted] and at www.LSPower.com and www.LSPowerGrid.com.

The value provided by LS Power through competitive transmission solicitations has been recognized by a majority of Independent System Operators. LS Power was selected to implement competitive transmission projects in: 1) PJM for its first competitive solicitation; 2) MISO for its first competitive solicitation; 3) NYISO for the largest competitive transmission project in the United States to date; and 4) CAISO for three separate solicitations. This success, further outlined in Table 2-2, demonstrates LS Power's unique ability to successfully implement competitive projects while providing significant value to ratepayers.

[redacted]

[3] California ISO, Project Sponsor Selection Report dated January 11, 2016.

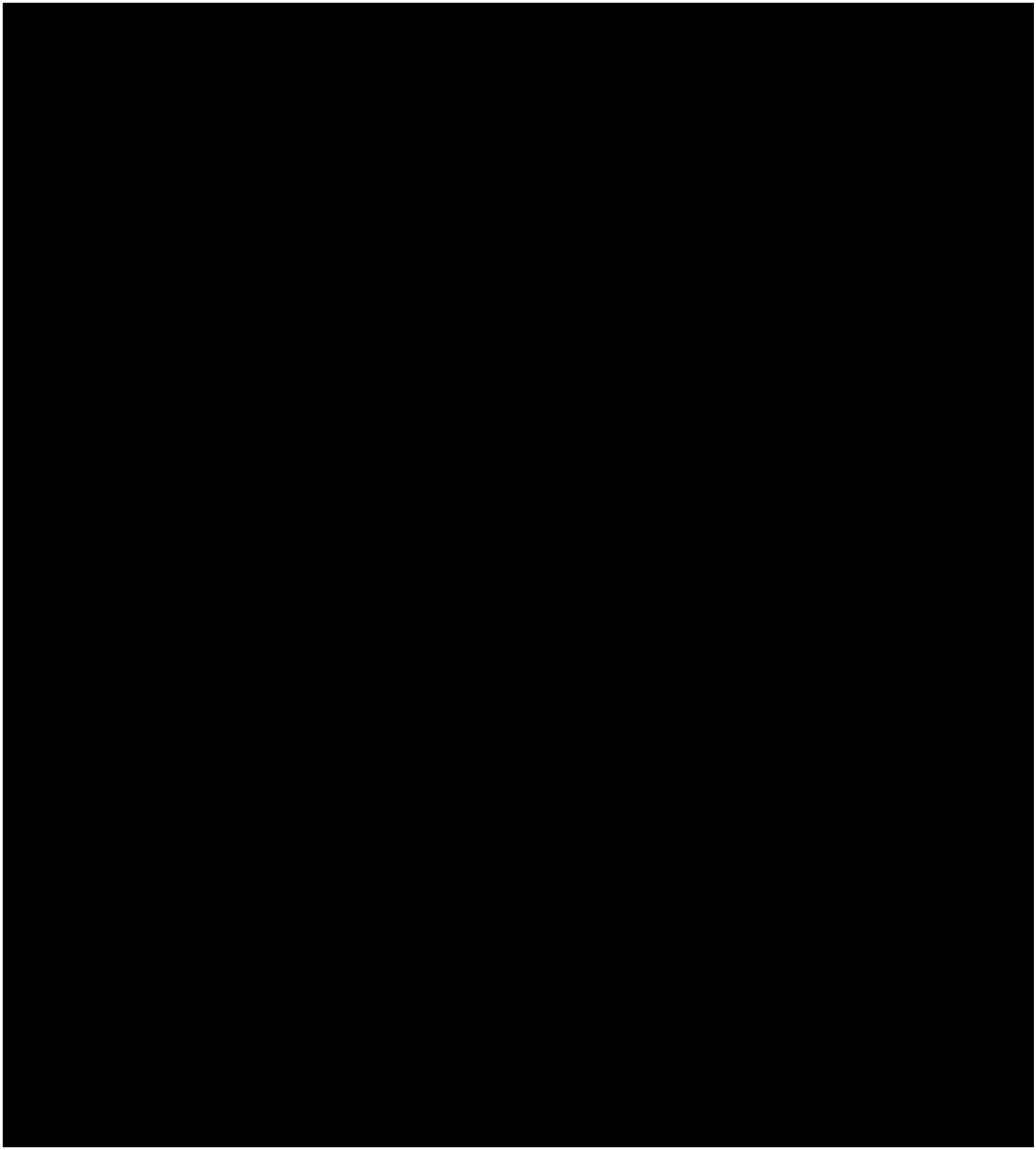
[4] PJM Interconnection, L.L.C, Artificial Island Recommendation White Paper dated July 29, 2015

[5] AC Transmission Public Policy Transmission Plan dated April 8, 2019

[6] Gates 500 kV Dynamic Reactive Support Project Sponsor Selection Report dated January 17, 2020

[7] Round Mountain 500 kV Dynamic Reactive Support Project Sponsor Selection Report dated Feb. 28, 2020

Proposal Team



III. Project Summary

The offshore component of the Clean Energy Gateway is a cost effective, efficient, and reliable solution to deliver OSW to the onshore transmission grid. The Project provides an offshore [redacted] AC network capable of delivering [redacted] of OSW (depending on whether the BPU elects an expansion option). OSW will connect to the Project, [redacted], at offshore substations strategically located to provide efficient delivery of energy from lease/call areas to the Lighthouse substation (see LSPG Option 1B proposals). A [redacted] Lower voltages would require more cables, increasing costs and environmental impacts while higher voltages would limit the New Jersey's access to OSW.

LSPG is proposing a base Project that is capable of interconnecting [redacted] of OSW at two substations. In addition, LSPG is providing the BPU with the opportunity to expand the Project to allow OSW interconnections of up to [redacted]. The Project will be phased over time to match the timing of planned OSW additions and provide ratepayer savings. [redacted]

[redacted]

[redacted]

New Substations

The base Project includes two new offshore [redacted] substations (Revolution substation and Prosperity substation) in a breaker-and-a-half arrangement. LSPG has identified three locations strategically located in proximity to the Hudson South call area and the Atlantic Shores/Ocean Wind leases. All three locations will be permitted and the two locations that best fit the OSW selections made by BPU in future solicitations will be constructed. [redacted] have completed preliminary design for the substations, which are storm hardened to withstand extreme events. [redacted]

[redacted] Each substation will have three primary decks: (1) a cable deck that will house control and communication equipment, firefighting equipment, and HVAC equipment; (2) a main deck that will house the GIS equipment and shunt reactors; and (3) a cooler deck that will house the radiators to cool the equipment. Each substation will be fully equipped with all breakers and reactors to interconnect cables from OSW including the reactors needed to compensate generator lead lines. Technical specifications, one-line diagrams, and detailed layout drawings for the new substations are provided in Attachment 3-1, Attachment 3-2, and Attachment 3-3, respectively.

- Expansion Option 1: [redacted] Layout drawings for the expanded substations are provided in Attachment 3-3 Expansion.
- Expansion Option 2: [redacted]

Submarine Transmission Cables

[redacted] Where traditional installation is not feasible, (i.e. crossing of utilities), the cables will be installed at shallower depths or laid on the surface and protected with a concrete cap. The cables will be installed in consolidated corridors with each cable spaced to allow for future repairs. At the shore line the cables will be installed within a casing placed 25-50 ft. below the beach via horizontal directional drill (HDD). Thermal grout with superior thermal resistivity will be used in the HDD casing to enable sufficient power transfer capability. At the shore the cables will be spliced to land-based cable in a splice vault and land cables will be installed in concrete encased duct banks to the Lighthouse substation. Cable routing, crossing location and installation details are discussed in Section VI. Cable splice vault details, cable specifications, and right-of-way layout drawings are provided in Attachment 3-4, Attachment 3-5, and Attachment 3-6, respectively.

- Revolution-Lighthouse: consists of [redacted] circuits traversing approximately [redacted] between Revolution substation and Lighthouse substation.
    - Expansion Option 1: will consist of adding [redacted] additional circuits.
- Prosperity-Lighthouse: consists of [redacted] circuits traversing approximately [redacted] between Prosperity substation and Lighthouse substation.
    - Expansion Option 1: will consist of adding [redacted] additional circuits.

- Alternate Site-Lighthouse: [redacted]
    - Expansion Option 2: will consist of constructing [redacted] along this corridor in addition to the Revolution-Lighthouse and Prosperity-Lighthouse corridors.

Additions to Lighthouse Substation

[redacted]

III.1 PROJECT OPTIONALITY, FLEXIBILITY AND MODULARITY

The Clean Energy Gateway offers flexibility and optionality in a reliable manner that minimizes impacts to the environment and stakeholders. The Project is designed to be completed in phases and is expandable at BPU's election. [redacted]

Table 3-1 Project Phase Overview

Phase	Base Proposal	Expansion Option 1	Expansion Option 2
1	Install Revolution substation and 4 circuits to Lighthouse substation	Install expanded Revolution substation and 4 circuits to Lighthouse substation	Same as Base
2	Install Prosperity substation and 4 circuits to Lighthouse substation	Install expanded Prosperity substation and 4 circuits to Lighthouse substation	Same as base
3	N/A	Install 2 additional circuits from Prosperity to Lighthouse substations and 2 additional circuits from Revolution to Lighthouse substations	Install third offshore substation site and 4 circuits to Lighthouse

[redacted]

[redacted]

III.2 INTERDEPENDENCY OF OPTIONS

[redacted]

III.3 OVERVIEW OF BENEFITS

The Clean Energy Gateway provides New Jersey with certainty that it can exceed its goals to integrate 7,500 of OSW in a manner that is cost effective, reliable, low risk, and has the lowest overall impact to the environment and communities. Benefits of the Project include:

- Delivery of 4,000 MW to 6,000 MW of OSW;
- Enhanced reliability and reduced OSW curtailment from the use of integrated parallel transmission circuits protected by full transmission grade substations;
- [redacted]
- Minimized environmental and community impacts through a [redacted]
- Ratepayer protection provided by a [redacted]
- Reduced project-on-project risk by allowing transmission infrastructure advance ahead of OSW; and
- Improved competition from OSW in future solicitations that is not skewed by transmission and interconnection costs.

III.4 OVERVIEW OF MAJOR RISKS AND STRATEGIES TO LIMIT RISK

The Clean Energy Gateway is designed to limit risk to New Jersey ratepayers. Extensive due diligence was completed to provide New Jersey with certainty that the Project is feasible, can be completed in a timeframe that meets the state's OSW timeline, and is cost effective. Ultimately, LSPG is insulating New Jersey ratepayers from project risks by providing firm cost containment commitments and a schedule guarantee. The most impactful project risks and strategies taken to mitigate the risks are summarized below:

- [redacted]
- [redacted]
- [redacted]
- [redacted]

III.5 OVERVIEW OF COSTS, COST CONTAINMENT AND COST RECOVERY

The Project is estimated to cost $2.17 billion in 2021 dollars or $2.49 billion in nominal year of occurrence dollars. These estimates are inclusive of all development, financing (AFUDC), commissioning, and other costs necessary to place the Project in-service. Project cost will be recovered through traditional cost-of-service based transmission formula rates with provisions that limit ratepayer risk. This approach provides the best overall value to customers because they are protected from cost overruns by binding commitments while benefiting from lower rates if actual costs are below estimates.

[redacted]

LSPG anticipates that investments in the Project will be placed in rates over a period of 3-5 years, as early as 2029 as project phases are completed to match the OSW procured by the BPU. [redacted]

IV. Proposal Benefits

The Clean Energy Gateway provides certainty that New Jersey can exceed its goal to integrate 7,500 of OSW in a manner that is cost effective and reliable with the lowest overall impact to the environment and local communities. Compared to a traditional generator lead/radial approach, the Project is:

- Lower impact, placing new submarine transmission lines in common corridors and avoiding repeated disturbances;
- More reliable, with a networked solution that meets NERC planning criteria and includes storm hardened infrastructure; and
- Lower cost, reducing OSW lead/radial line costs;
- Lower risk, reducing reliance on uncoordinated network upgrades through the interconnection process.

IV.1 RELIABILITY BENEFITS

The Clean Energy Gateway individually ensures reliable delivery of up to 6,000 MW of OSW to New Jersey load. The Project incorporates thoughtful solutions to meet reliability criteria, solve system violations, and enhance grid resiliency. Project components incorporate rigorous design criteria with the ability to withstand extreme weather events to provide high availability.

LSPG implemented the principle to provide a highly reliable Project design while also providing a cost-effective solution with the least risk. Particular importance was placed on reliability because of the large scale of the solution and New Jersey's future reliance on OSW. The Project traverses an area that incurs frequent severe weather events including hurricanes, thunderstorms, lightning strikes, and ice storms. Design elements were incorporated to enhance reliability including meeting rigorous design criteria and specific measures to protect the Project against severe weather. Specific design elements incorporated into the Project to ensure reliability include:

- Substations: all substations will have a breaker-and-a-half breaker arrangement to ensure that a breaker failure or bus fault does not cause overloads on the Project. [redacted]

[redacted]

generator lead lines and DC converter stations that have single points of failure. Gas insulated breakers, switches, and protection and control equipment protected inside the climate controlled topside. [redacted]

- Transmission Lines: [redacted]

IV.2 PUBLIC POLICY BENEFITS

The Project provides a reliable, low impact, and economical transmission solution to exceed New Jersey's clean energy goals, which target 7,500 MW of OSW by 2035. The Project will reduce the cost of OSW lead/radial lines as well as increase certainty regarding onshore and offshore transmission infrastructure. As a networked solution, the Project will reduce the risk of OSW energy curtailment and system congestion.

Offshore Wind Cost Savings

Ratepayers will benefit from the Clean Energy Gateway's ability to reduce the cost of offshore wind. First, the Project enables fair competition among OSW developers based on the merits and economics of their wind projects without one developer having a significant advantage or disadvantage based on their interconnection plans. The proximity of the Project's points of interconnection (Revolution and Prosperity substations) to current and future OSW lease areas allows for economical [redacted]

Increased Offshore Wind Goals

The Clean Energy Gateway provides New Jersey with the opportunity to go beyond its goal of 7,500 MW of OSW. The Project can reliably deliver up to 6,000 MW of OSW. As shown in Table 4-1, the Project will facilitate total OSW connections that exceed the state's goals.

[redacted]

An important element of the Clean Energy Gateway is that it integrates a large quantity of OSW in a condensed set of corridors to reduce impacts on ratepayers, the environment, and stakeholders. This leaves alternate shore landing locations and transmission line corridors for future expansion of OSW capacity.

IV.3 OTHER BENEFITS

In addition to reliability, cost, and market efficiency benefits, the Clean Energy Gateway provides environmental and economic benefits to New Jersey.

Environmental Benefits

[redacted]

Economic and Community Benefits

Considerable attention was given to reducing the impact of the Project on New Jersey communities and stakeholders. Particular importance was placed on the shore landing location because it determines the communities impacted by offshore cables, landing locations, and onshore cables.

[redacted]

In addition to being low impact, the Clean Energy Gateway will provide substantial benefits to local communities and the state of New Jersey. These benefits include:

- Economic Development: [redacted]

- [redacted]
- [redacted]
- Maintenance Facilities: [redacted]

V. Proposal Costs, Cost Containment Provisions, and Cost Recovery

LSPG implemented the principle that it would not sacrifice safety, reliability, or quality while still providing a cost effective solution with the least risk. Substantial efforts were expended to inform a detailed cost estimate and support the cost containment measures, which protect New Jersey ratepayers from the most significant commercial risks to implement the project. Design measures were incorporated beyond the minimum requirements to increase reliability, provide flexibility, increase certainty, and reduce implementation and operational risks. These efforts benefit BPU and PJM by ensuring that the cost estimate is realistic, achievable, and backed by guarantees from a trusted entity with a track record of success.

V.1 COST RECOVERY MECHANISM

LSPG will recover its costs and returns through standard regulated cost recovery for transmission assets, subject to its cost containment mechanism. Costs will be recovered through a cost-of-service transmission formula rate using a projected test year and subsequent true-up to actual costs. Unlike the typical formula rates, LSPG will incorporate its cost containment provisions (described below) into its formula template to ensure its commitments are memorialized in the cost recovery mechanism. LSPG considered alternative cost recovery mechanisms (such as a fixed revenue requirement) and determined that this approach provides the best value for New Jersey customers. Ratepayers benefit from protections of cost overruns through firm commitments but retain the savings if actual costs are less than estimated without paying for expensive risk premiums that typically accompany fixed-price structures. LSPG's capped cost-of-service approach also ensures that ratepayers benefit from items like the investment tax credit for transmission infrastructure that is currently proposed by the U.S. legislature.

Cost Recovery Inputs

The cost of the Project to New Jersey ratepayers is materially impacted by several key inputs that differ between project sponsors. In addition to the Project capital cost, and asset life the overall return on equity and debt rate are a major drivers to ratepayer costs. [redacted]

[redacted]

Return on Equity (ROE): [redacted]

Capital Structure: [redacted]

Debt Rate: [redacted]

[8] 2021 Formula Rate Projection posted on https://www.pjm.com/markets-and-operations/billing-settlements-and-credit/formula-rates

[9] LSPG affiliate, Silver Run Electric, debt rate for the same period - 2021 Formula Rate Projection posted on https://www.pjm.com/markets-and-operations/billing-settlements-and-credit/formula-rates

[redacted]

Project Life/Depreciation: the Project will be operated and maintained in a manner that provides a physical life that exceeds 40 years. Project components that have an expected life of less than 40 years will be replaced to match or exceed the life of other components. The cost of these replacements are provided in ongoing capital expenditure estimate (see Section V.2.). The depreciable life will be set, consistent with FERC precedent for new utilities, by a depreciation study completed after the assets are placed in service which will set the timeframe for cost recovery. The asset life is expected to be consistent with affiliate companies that own similar assets.

[redacted]

[redacted]

[redacted]

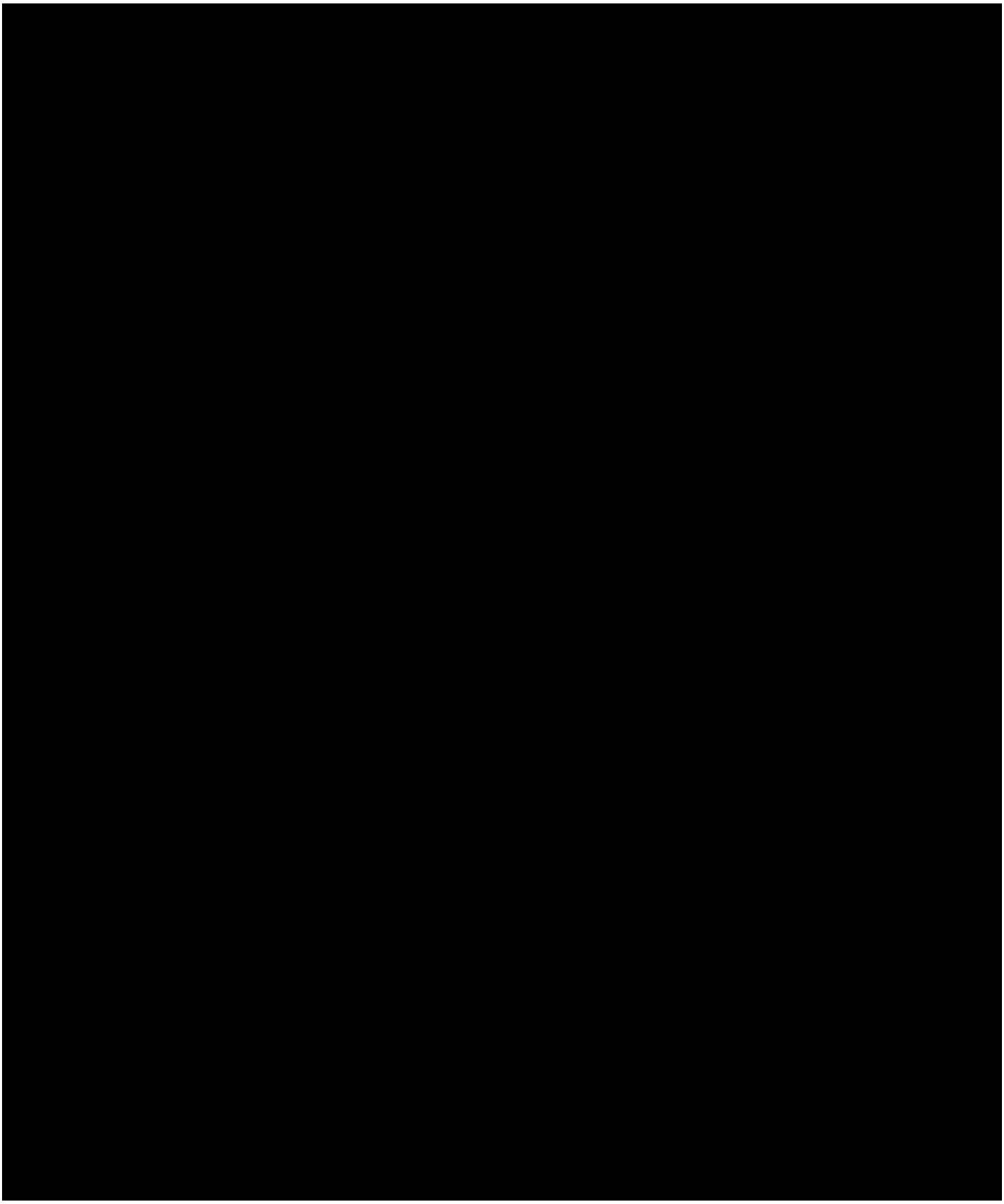
Taxes: the project will be subject to income taxes in New Jersey and at the federal level as well as property taxes as discussed below. Long-term estimates for income and property taxes applicable

to the project are included in the projection of annual transmission revenue requirements provided in Attachment 5-1.

- [redacted]
- [redacted]
- [redacted]
- [redacted]

Operations, Maintenance, General and Administrative Expenses: the project will be operated and maintained by LS Power leveraging its existing programs supplemented by new maintenance resources dedicated to the Project. LS Power's existing NERC certified control centers, that currently operate transmission infrastructure in New Jersey and PJM, will operate the project. [redacted] Table 5-3 provides a summary of these expenses.

[redacted]



[redacted]

Spare Parts: LSPG will maintain Project specific local spare parts to ensure a high level of reliability, which will be included in transmission rates. A list of the planned spare parts and their estimated cost is included in Attachment 5-2. These spare parts were included in the revenue requirement estimate included as Attachment 5-1.

FERC Incentives: [redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]

Annual Transmission Revenue Requirement

LSPG estimated the annual revenue requirement for the life of the project in Attachment 5-1 reflecting the inputs discussed above and the projected project costs and ongoing capital expenditures. LSPG is providing [redacted]

V.2. PROJECT COST ESTIMATES

[redacted]

Cost Estimate Detail

[redacted]

Ongoing Capital Expenditures

The Project is designed to provide long useful life without the need for significant ongoing capital expenditures. Transmission cables are buried beneath the sea floor and all substation equipment is protected within the platform building. Ongoing capital expenditures is anticipated for a limited set of items because the technology is not designed to match the operating life of the remainder of the Project. Table 5-11 shows the anticipated ongoing capital expenditure intervals and their ongoing costs. These capital expenditures are included in the annual transmission revenue requirement estimate provided in Attachment 5-1.

V.3. COST CONTAINMENT

LSPG is proposing [redacted] binding cost containment commitments that protect New Jersey ratepayers, which include: [redacted] The terms and conditions for these binding rate commitments are included in Attachment 5-3. These cost containment measures provide substantial value and protections for New Jersey and ratepayers providing cost certainty for all components of the revenue requirement.

To effectuate these cost commitment measures, LSPG will file with FERC to incorporate the cost containment provisions into its formula rates and these provisions can be included in the Designated Entity Agreement.

Binding Project Cost Cap

LSPG is providing a binding Project Cost Cap of [redacted]

[10] https://www.pjm.com/-/media/committees-groups/subcommittees/cds/postings/handy-whitman-index.ashx

[redacted]

The transmission ratepayer would typically be exposed to all of these risks, associated increases in costs, and increased revenue requirements, which are significant for a project of this magnitude. Any one of the risks identified above could result in tens millions to hundreds of millions of dollars in additional cost to the Project. Altogether, absent the binding Project Cost Cap commitment, the ratepayer would otherwise be exposed to hundreds of millions of dollars in potential cost increases or overruns. The Project Cost Cap provides assurance to BPU that the value of the Clean Energy Gateway will not be eroded by cost increases.

The binding Project Cost Cap is being provided at no premium to ratepayers – if project costs are below the cap, then only the actual costs will be included in the rate base. However, if project costs are above the cap, then ratepayers will only pay rates on a rate base of [redacted] for the project.

[redacted]

[redacted]

Transmission Revenue Requirement (TRR) Cap

[redacted]

Return on Equity (ROE) Cap

LSPG is committing to a Binding Return on Equity Cap of [redacted] This provides ratepayers certainty related to the cost of equity for the entire life of the Clean Energy Gateway. Ratepayers would otherwise be exposed to potential rate increases due to prevailing market conditions for the cost of equity or ROE adders/incentives over time.

[redacted]

Equity Percentage Cap

LSPG is committing a binding cap on the actual or hypothetical capital structure used for determining its revenue requirements and AFUDC such that the equity component does [redacted]. The debt/equity ratio is a significant contributor to the cost of capital and the revenue requirement associated with the project. Because the ROE is typically much higher than the cost of debt, a lower percentage of equity will act to lower the weighted average cost of capital.

[redacted]

Guaranteed Completion Date

[redacted]

V.4. ENERGY LOSSES

[redacted]

[redacted]

[redacted]

V.5. COST IMPACT BY SELECTION OF A SUBSET

[redacted]

VI. Project Risks and Mitigation Strategy

[redacted]

[redacted]

Schedule Management

[redacted]

Cost Management

[redacted]

[redacted]

Project Communication

[redacted]

- Project Objectives
  [redacted]
- Project Coordination
  [redacted]
- Project Outreach
  [redacted]
- Commitments
  [redacted]

- PJM and BPU Communication

[redacted]

Quality Management

[redacted]

Issue Management

[redacted]

[redacted]

VI.1 RISK MITIGATION MEASURES

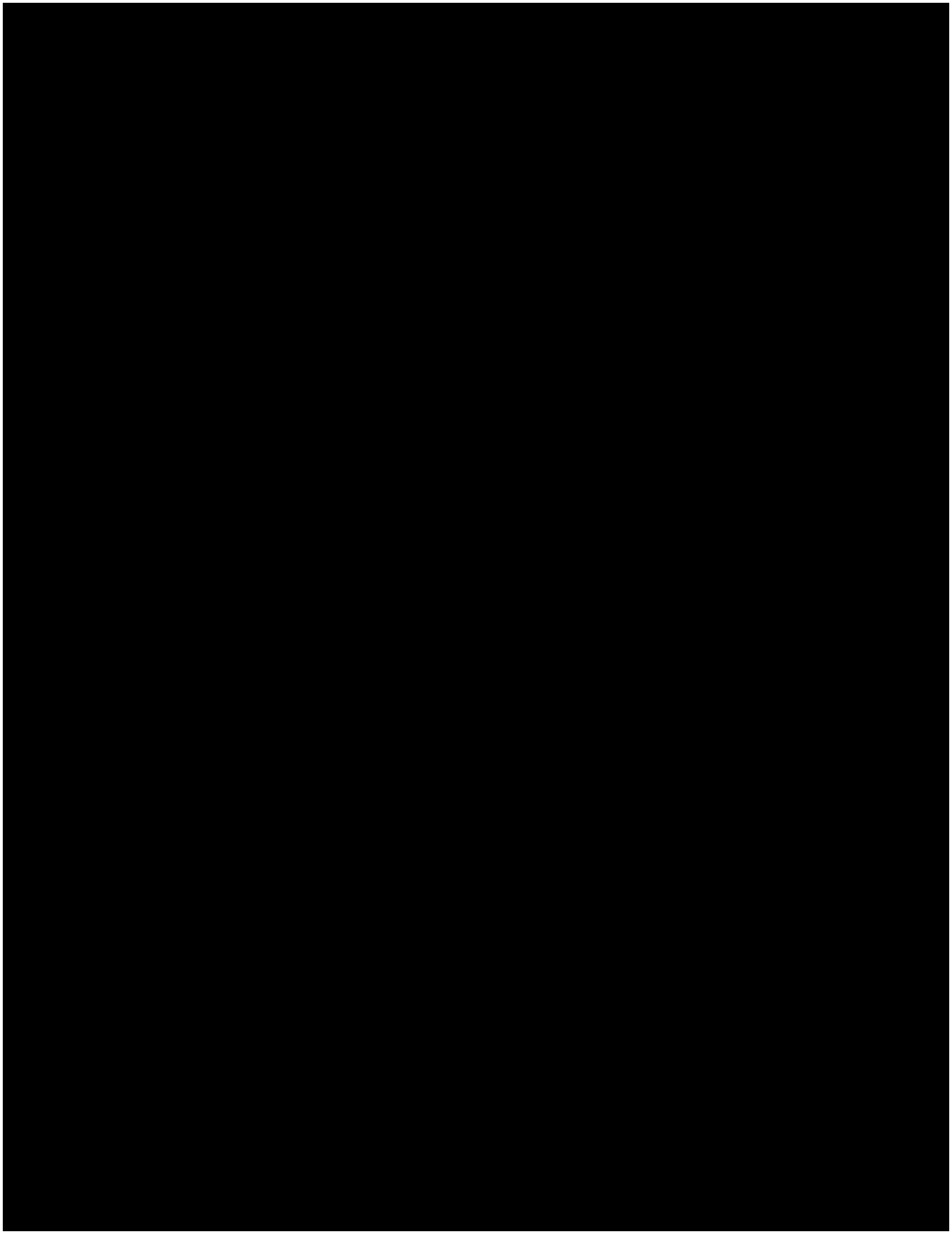
[redacted]

Engineering Risks & Mitigations Measures

[redacted]

[redacted]

[redacted]



Supply Chain Risks & Mitigations Measures

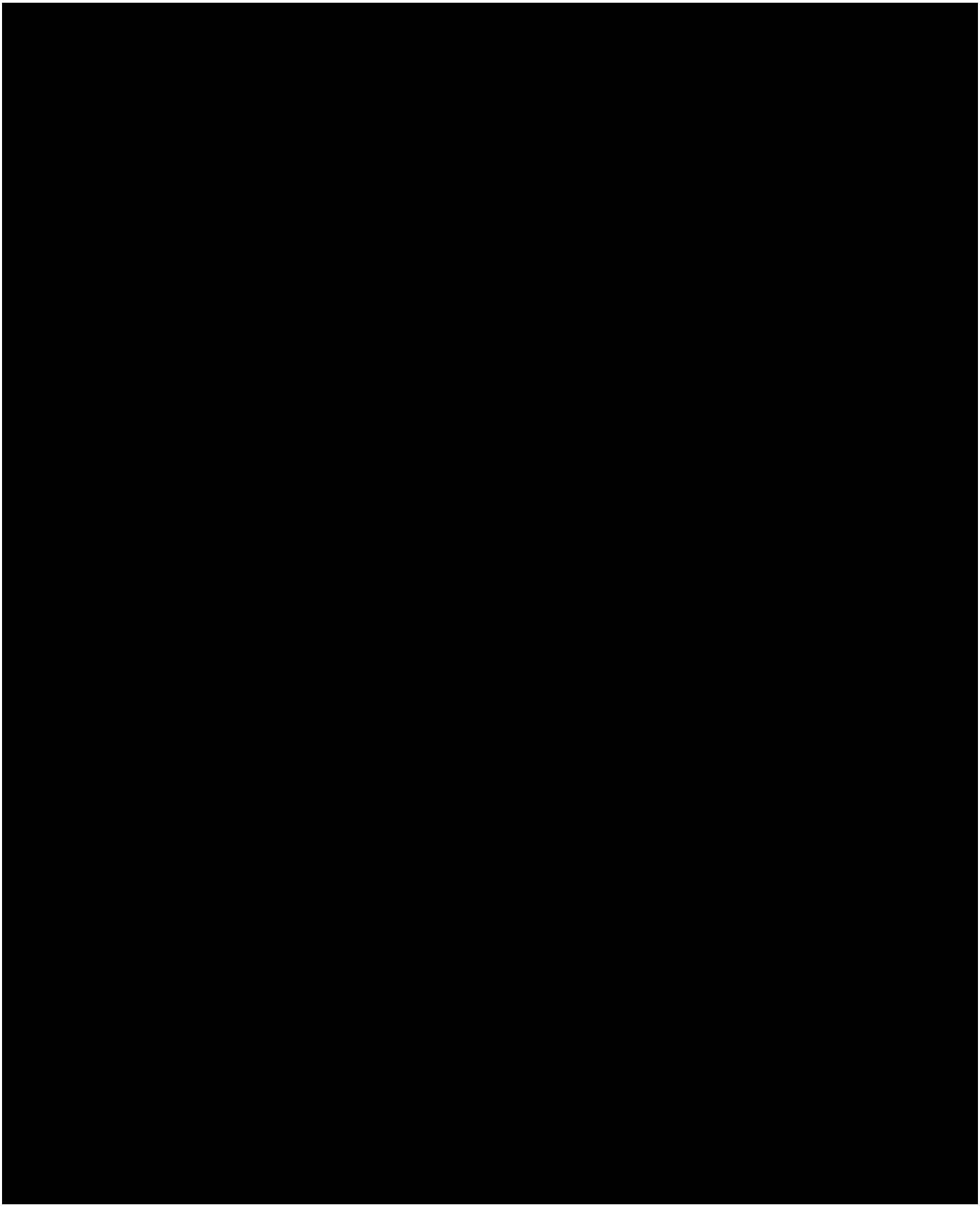
Construction Risks & Mitigations Measures

[redacted]

[redacted]

Environmental & Permitting Risks & Mitigations Measures

[redacted]



[redacted]

Project-on-Project Risks & Mitigation Measures

[redacted]

[redacted]

[redacted]

[redacted]

VI.2 SITE CONTROL PLAN

[redacted]

[redacted]

Bureau of Ocean Energy Management Approvals

[redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]

[redacted]

- [redacted]
- [redacted]

[redacted]

[redacted]

[redacted]

VI.3 STAKEHOLDER ENGAGEMENT PLAN

[redacted]

Engagement Plan Goals

[redacted]

Outreach Strategy

[redacted]

[redacted]

- [redacted]
- [redacted]
- [redacted]

[redacted]

Public Engagement and Involvement

[redacted]

- [redacted]
- [redacted]
- [redacted]

[redacted]

[redacted]

VI.4 SUPPLY CHAIN PLAN

[redacted]

Identify and Qualify Suppliers

[redacted]

Material Sourcing

[redacted]

Material Testing, Inspection and Fabrication

[redacted]

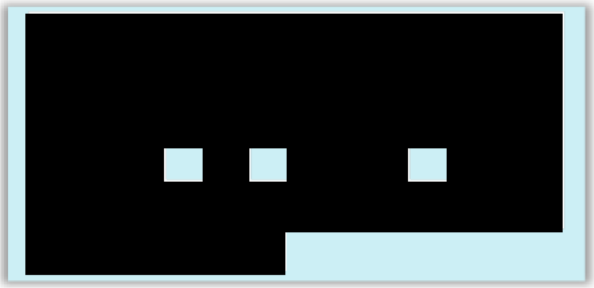
Supply Chain Risk Mitigation and Controls

[redacted]

[redacted]

- Quality Controls

[redacted]



[redacted]

- Factory Availability

[redacted]

- Shipping Vessel Availability

[redacted]

[redacted]

- Schedule Controls

  [redacted]

- Cost Controls

  [redacted]

VI.5 CONSTRUCTION PLAN

[redacted]

Horizontal Directional Drilling

[redacted]

[redacted]

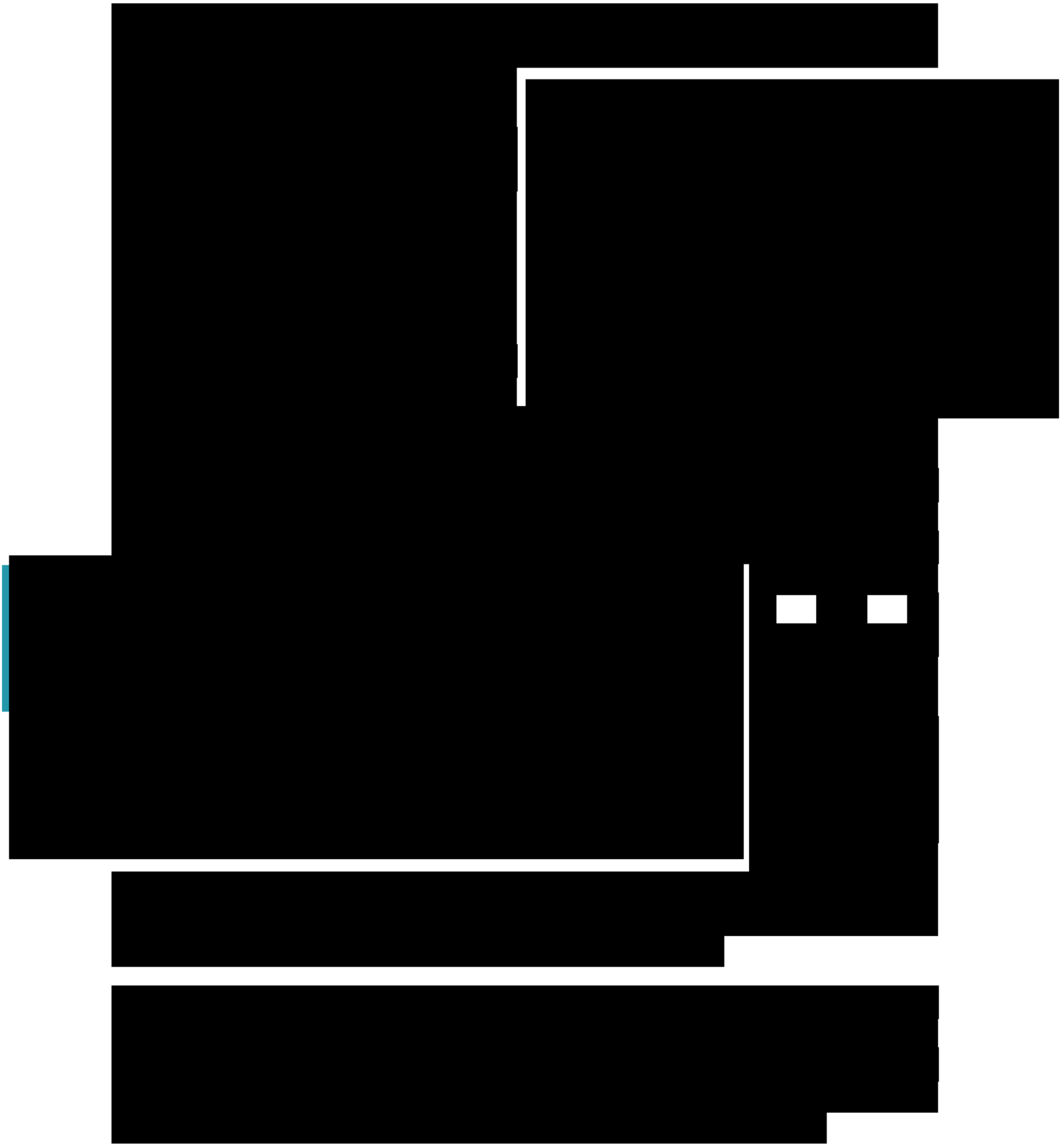
HORIZONTAL DISTANCE (FT)

[redacted]

Offshore Substation Installation

[redacted]

[redacted]



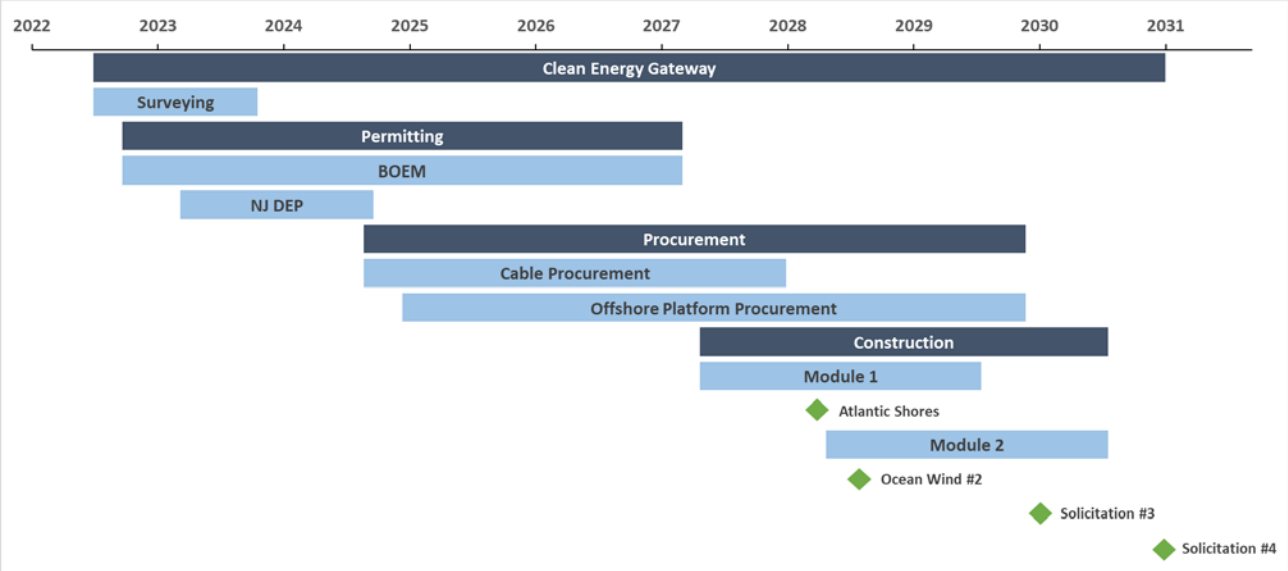
VI.6 PROJECT SCHEDULE

[redacted]

[redacted]

[redacted]

Figure 6-15 Project Schedule



[redacted]

Schedule Guarantee

[redacted]

Schedule Drivers

[redacted]

Permitting

[redacted]

Submarine Cable Procurement

[redacted]

[redacted]

Offshore Platform Procurement

[redacted]

Submarine Cable Installation

[redacted]

Table 6-14 Cable Installation Summary

Component	Submarine Cable Installation (Months)
Lighthouse – Revolution	24
Lighthouse - Prosperity	24

[redacted]

Schedule Constraints

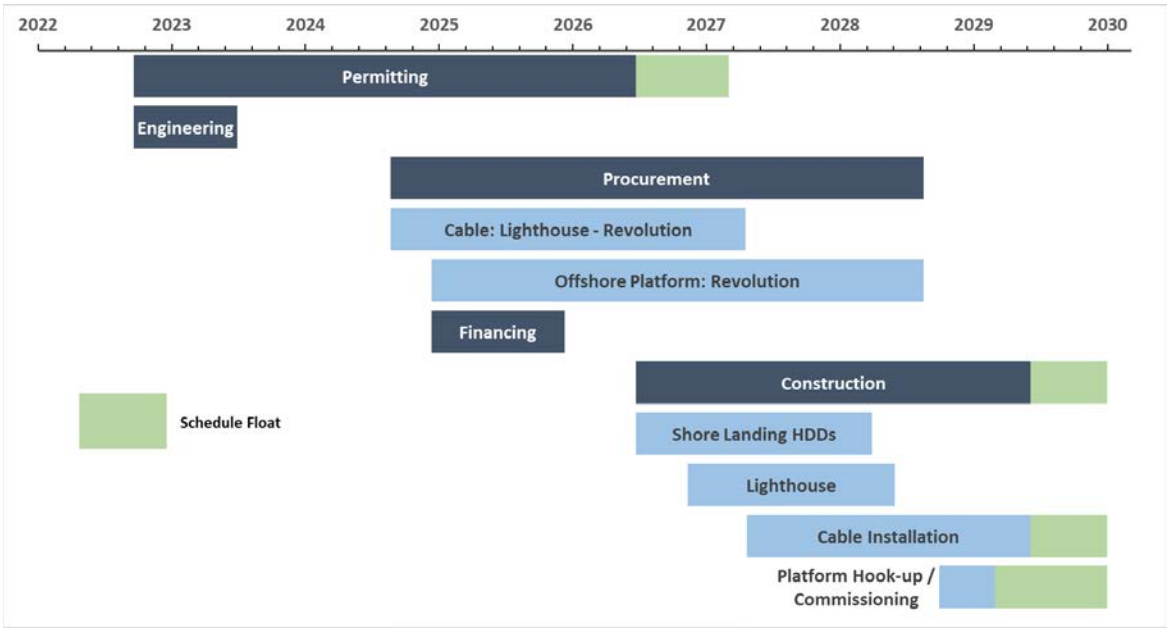
[redacted]

Critical Path Schedule by Module

Phase 1

[redacted]

Figure 6-16
Phase 1
Critical Path

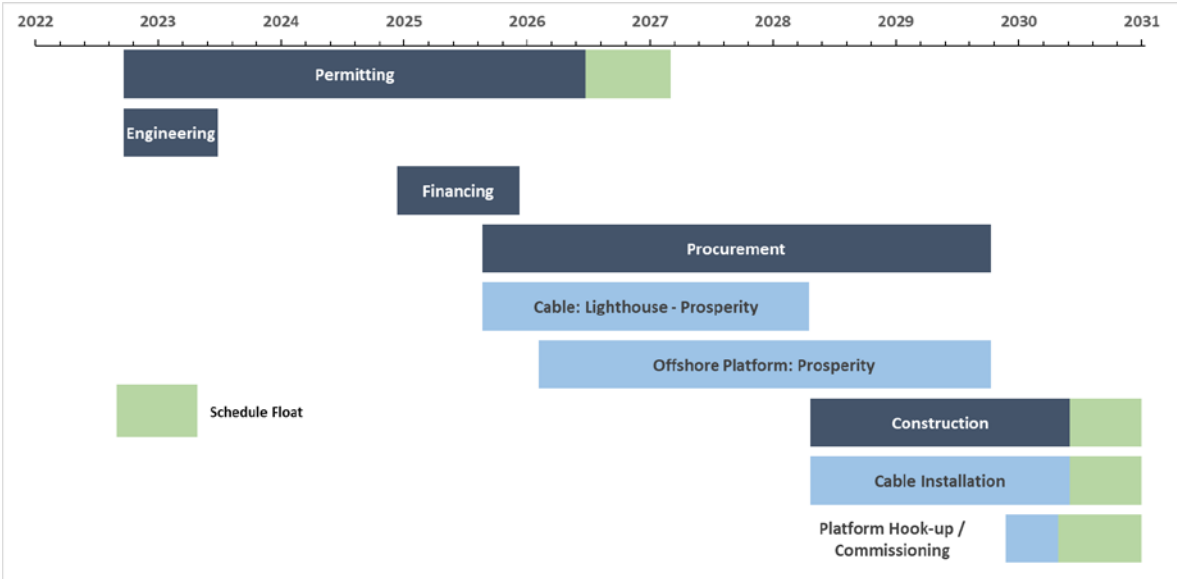


[redacted]

Phase 2

[redacted]

Figure 6-17
Phase 2
Critical Path



[redacted]

VII. Environmental Impacts and Permitting

[redacted]

VII.1 Environmental Benefits vs Radial Lines

[redacted]

Fisheries, Habitat, and Sensitive Resources

[redacted]

[redacted]

[redacted]

[redacted]

Environmental Impacts

[redacted]

Direct Ocean and Ecological Observations

[redacted]

[redacted]

Stakeholder Impacts

[redacted]

VII.2 Environmental Protection Plan

[redacted]

Physical, Biological, and Socioeconomic Resources

[redacted]

[redacted]

[redacted]

Cultural Resources

[redacted]

[redacted]

[redacted]

Quantification of Potential Impacts to Resources

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Exclusion Zones

[redacted]

Avoidance, Minimization and Mitigation Measures

[redacted]

VII.3 Fisheries Protection Plan

[redacted]

[redacted]

Existing Marine Resources

[redacted]

[redacted]

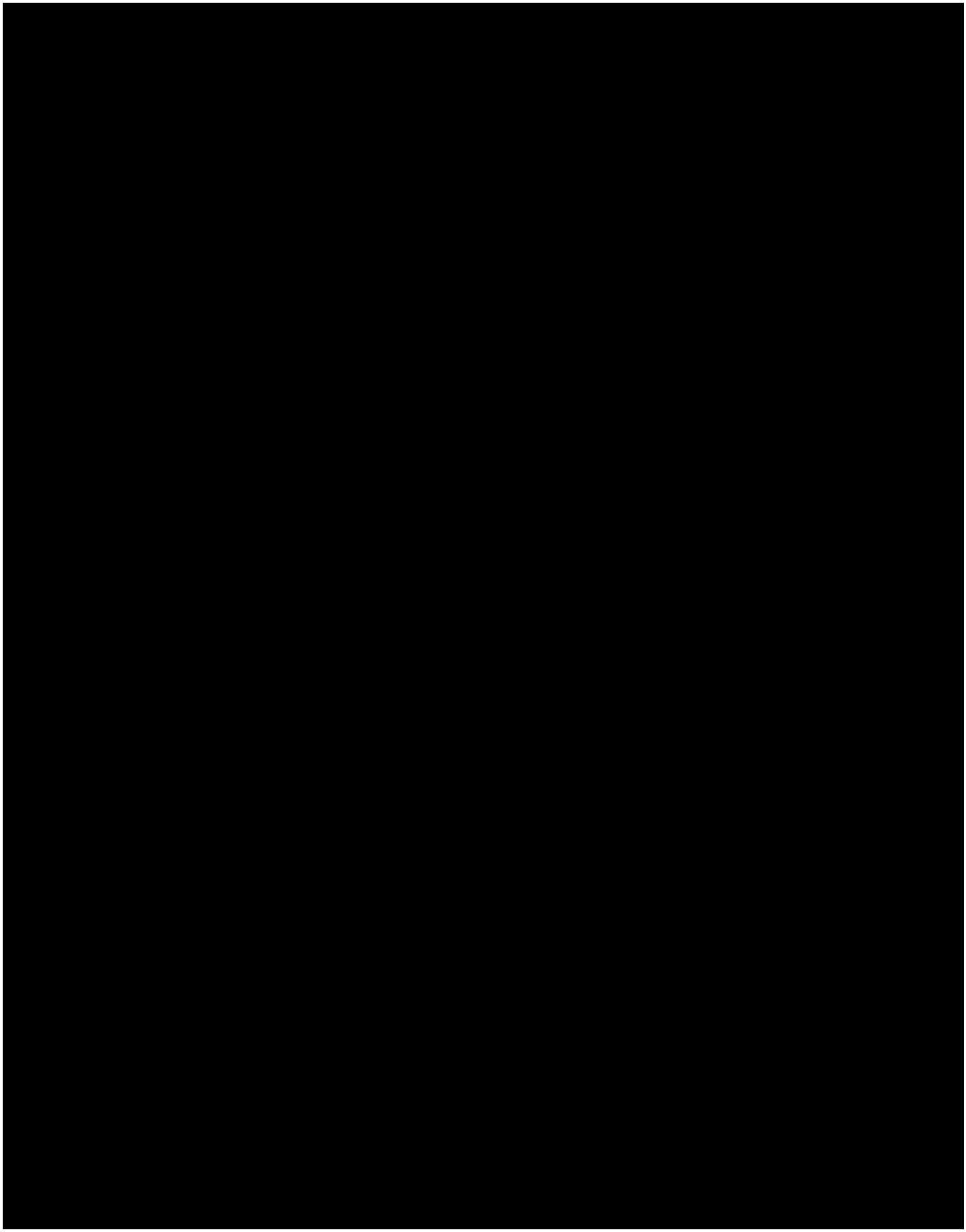
Marine Resource Impact Detection Plan

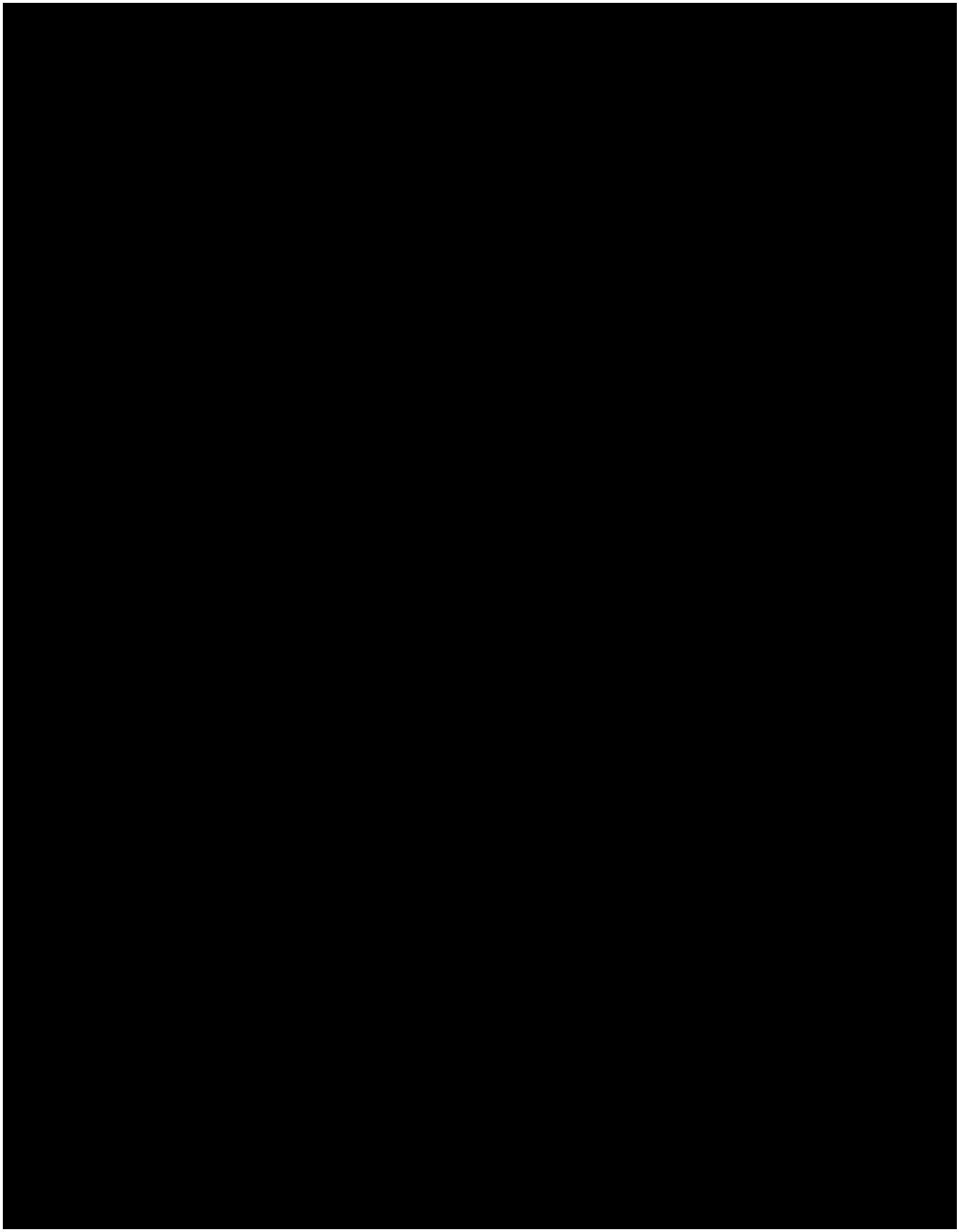
[redacted]

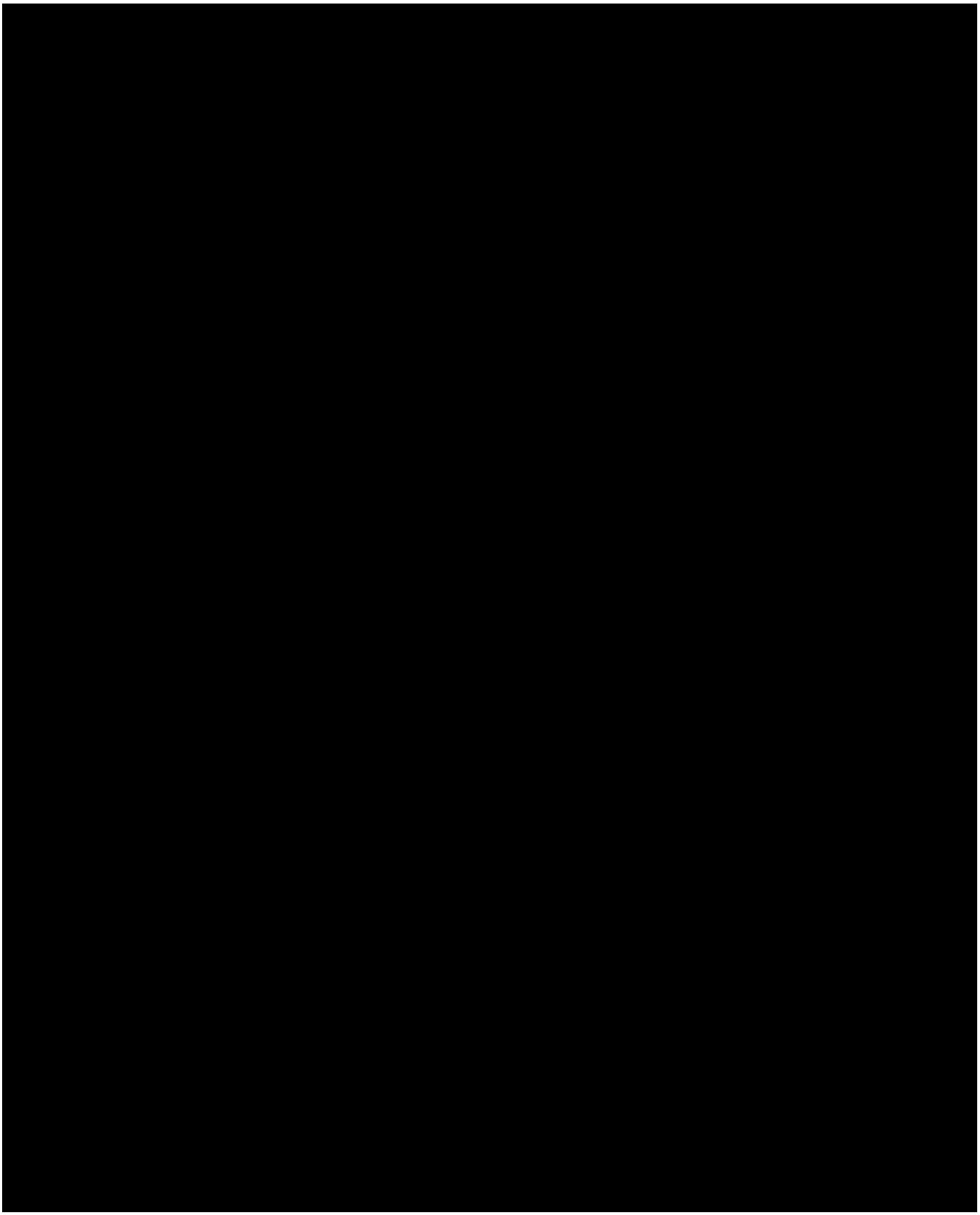
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

Potential Impacts to Marine Resources

[redacted]







[redacted]

Pre-Construction Activities

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

Construction Activities

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

Project Operation

- [redacted]

- [redacted]
- [redacted]

Project Decommissioning and Close-Out

- [redacted]

Access to Fishing Grounds

[redacted]

[redacted]

Loss or Damage to Gear or Vessels

[redacted]

[redacted]

VII.4 Environmental and Fisheries Stakeholder Engagement

[redacted]

Fisheries Stakeholder Engagement

[redacted]

[redacted]

[redacted]

- [redacted]
  - [redacted]
  - [redacted]
  - [redacted]
  - [redacted]

[redacted]

  - [redacted]
  - [redacted]
  - [redacted]

[redacted]

[redacted]

VII.5 Permitting Plan

[redacted]

Agency Consultation

[redacted]

[redacted]

Permit Process and Timelines

[redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]

[redacted]

[redacted]

[redacted]

[14] N.J. Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.), Section 401 of the Federal Clean Water Act (33 U.S.C. §1341), Section 402 of the Federal Clean Water Act (33 U.S.C. §1342), Section 404 of the Federal Clean Water Act (33 U.S.C. §1344), Sections 9 and 10 of the Rivers and Harbors Act (33 U.S.C. §403 and 404).

VIII. Attachment Index