ID Concern [reg.]	Category / Element	Risk Short Title	Description	Desired Outcome	Current Situation	Proposed Strategy	Risk (three-part) Statement			Current Risk			Response	Mitigating Action / Response					Manageability	Residual Risk	Risk Owner	Target Review Date	Close Date	Last Review Date / Notes
							Cause	Risk Event [uncertainty]	Consequence	Probability	Impact	Score (PxI)		ID	Action	Action Owner	Due Date	Close Date						
C00008	R8 Political / Government	Impact of Corruption on Project Governance and Execution	Corruption in government institutions or procurement processes poses a significant challenge to the successful implementation of large-scale initiatives, such as integrating power generation projects with modular refineries and mini-grids. These practices can lead to inefficiencies, compromised quality, and budget overruns, which ultimately undermine project objectives and stakeholder trust.	To establish transparent, accountable governance structures and implement rigorous monitoring mechanisms that minimize opportunities for corruption, ensuring timely and efficient project execution. Could Go Wrong? Unchecked corruption could result in widespread inefficiencies, delays, increased costs, and the deployment of substandard materials or equipment, reducing the credibility and sustainability of the project.	Instances of corruption, favoritism, and misallocation of resources have historically hindered development projects. Presently, the project is in its planning phase, where these risks must be proactively addressed through robust policies and engagement with ethical partners.	Develop a comprehensive anti-corruption framework embedded within the PHC Service, including stakeholder training, real-time audits, transparent procurement practices, and a whistleblower protection program. Collaborate with international watchdogs to foster integrity and align with global best practices.	The presence of weak institutional frameworks and lack of oversight mechanisms facilitates corruption in procurement and resource allocation.	Corrupt practices during the procurement process or allocation of contracts lead to delays, inflated costs, and substandard implementation.	Project efficiency and credibility are compromised, potentially derailing objectives and damaging stakeholder confidence.	5	4 H-1 C-1 Q-1 S-1	20	Mitigate	#1	Develop anti-corruption framework.	David, Winter	13Mar25	Open	4	16	David, Winter	25Apr26	Open	12Jan25 Corruption in government institutions or during the procurement process may lead to delays, inflated costs, or substandard materials and equipment. Misallocation of resources or favoritism in awarding contracts could negatively affect project efficiency and credibility.
														#2	Establish whistleblower system within the PHC Service.	David, Winter	13Mar25	Open						
C00002	C3 Finance / Funding	Securing Adequate Financing for the Project	The success of this project is heavily dependent on securing sufficient financial support from private investors, international donors, or the Nigerian government. The funding is required for planning, implementation, and operational phases, and a lack of financial backing could lead to significant delays or even project cancellation. Additionally, high project costs in combination with unstable economic conditions might discourage potential investors from committing funds.	To ensure timely and sufficient funding is secured from diverse sources, including private investors, international donors, and governmental support, enabling smooth project execution without financial interruptions. Could Go Wrong? Delays or failure to secure financing may halt the project, resulting in missed opportunities, wasted resources, and a tarnished reputation.	Efforts to attract funding are ongoing, but no firm commitments have been secured yet. While preliminary discussions with stakeholders show interest, economic volatility and concerns about project costs have created hesitation among potential investors and donors.	Develop a robust financial model demonstrating project viability, ROI, and socio-economic benefits. Engage stakeholders through tailored presentations and meetings. Leverage partnerships and endorsements from credible organizations to build investor confidence. Diversify funding strategies to include government grants, CSR initiatives, and crowdfunding campaigns.	Economic volatility and high project costs reduce the appeal of investment opportunities.	Inadequate financial backing is secured from key stakeholders.	The project faces delays or termination, hindering its objectives and damaging stakeholder confidence.	4	4 H-1 C-1 Q-1 S-1	16	Mitigate	#1	Develop financial model.	Umoh, Camillus	13Mar25	Open	4	12	Inyang, Etido	31May25	Open	12Jan25 Failure to secure adequate financing from private investors, international donors, or the Nigerian government may delay or halt the project. High project costs could deter potential investors, especially in volatile economic conditions.
														#2	Engage Stakeholders by presentations and meetings	Umoh, Camillus	13Mar25	Open						
														#3	Diversify funding strategies.	Owodiong-Idemeko, Obong Ide O	13Mar25	Open						
C00012	R2 Security / Language	Risks of Infrastructure Disruption in Modular Refineries and Mini-Grids Network	The proposed integration of Nigeria's power generation assets with modular refineries and mini-grids aims to enhance electricity reliability and distribution. However, the project faces risks such as vandalism, theft, sabotage, and insurgent activities, particularly in remote and conflict-prone areas. These risks could significantly delay construction, escalate maintenance costs, and disrupt both construction and operation.	To implement robust strategies that mitigate security risks, safeguard materials and equipment, and ensure uninterrupted construction and operational phases for modular refineries and mini-grids. Could Go Wrong? 1. Persistent vandalism or theft could inflate project costs and create delays. 2. Insurgent attacks or regional unrest may lead to project halts or resource diversion.	Energy infrastructure in Nigeria frequently faces challenges from vandalism, theft, and sabotage, especially in under-served or conflict-affected areas. The modular refineries and mini-grids project spans rural zones where security is often inadequate, and insurgent groups operate.	1. Stakeholder Engagement: Collaborate with local communities to establish trust and mutual benefits. 2. Security Measures: Deploy surveillance technology, security personnel, and fencing at project sites. 3. Risk Assessment: Conduct periodic reviews of political and social stability in project zones. 4. Policy Integration: Align with national and local security frameworks to bolster defense.	Inadequate security measures and high-value equipment in remote areas create vulnerabilities.	Acts of vandalism, theft, or insurgent attacks disrupt construction and operations.	Delays in project timelines, increased costs, and reduced energy reliability for urban and rural populations.	4	4 H-1 C-1 Q-1 S-4	16	Mitigate	#1	Stakeholder engagement with local communites.	Harakat, Abubakr	13Mar25	Open	4	12	Harakat, Abubakr	14Mar26	Open	12Jan25 Vandalism, theft of materials or equipment, or sabotage of energy infrastructure, especially in remote areas, could delay construction or increase maintenance costs. Attacks by insurgent groups or unrest in certain regions could disrupt construction and operation of both modular refineries and mini-grids.
														#2	Deploy Surveillence technology for perimeter security.	Asibong, Ime	13Mar25	Open						

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C00014	R8 Political / Government	Community Resistance to Power Infrastructure Projects	The development of modular refineries, mini-grids, and transmission lines is critical to enhancing Nigeria's energy infrastructure. However, affected communities often resist these projects due to land acquisition disputes and concerns over environmental degradation. Such resistance could lead to significant delays, legal disputes, or the complete stalling of the project.	Establishing a robust community engagement strategy to address land use and environmental concerns, fostering trust and cooperation. Could Go Wrong? Failure to engage effectively with local communities might result in escalated protests, legal battles, and reputational damage, delaying or derailing the project.	Many communities express skepticism or opposition to energy projects due to past experiences of displacement or unfulfilled promises. There is limited structured engagement between project developers and local stakeholders to mitigate these issues.	1. Conduct comprehensive stakeholder mapping to identify all affected parties. 2. Initiate early and transparent consultations with local leaders and communities. 3. Develop community benefit programs, including job creation and infrastructure improvements. 4. Implement an environmental management plan with third-party validation to address ecological concerns. 5. Establish conflict resolution mechanisms to address grievances promptly.	Communities perceive land acquisition and environmental policies as unfair or inadequate.	Communities organize protests or file legal actions against the project.	The project experiences delays, increased costs, and possible reputational damage, impacting its overall success and stakeholder confidence.	4	4 H-1 C-1 Q-1 S-1	16	Mitigate	#1 #2 #3 #4	Establish Stakeholder Register. Develop community benefit program. Implement an Environmental Management Plan. Establish conflict resolution process for stakeholder grievences.	Harakat, Abubakr Harakat, Abubakr Umoh, Camillus Umoh, Camillus	13Mar25 13Mar25 13Mar25 13Mar25	Open Open Open Open	4	12	Asibong, Ime	14Mar26	Open	12Jan25 Communities affected by the construction of modular refineries, mini-grids, or transmission lines may resist the project due to land acquisition issues or concerns about environmental impact. Failure to properly engage with local communities could result in protests or legal actions, slowing down the project.
C00016	M9 Health / Safety / Environment	Environmental Risks Associated with Modular Refineries	The integration of modular refineries into Nigeria's energy infrastructure introduces potential environmental challenges, particularly related to emissions and waste disposal. If these facilities are perceived as significant contributors to pollution or environmental degradation, they may face strong opposition from environmental groups and the public. Addressing these concerns proactively is critical to ensure smooth implementation and long-term sustainability of the project.	The project incorporates comprehensive mitigation measures to address the environmental impacts of emissions and waste disposal, earning approval from environmental groups and ensuring compliance with international environmental standards. This approach not only reduces opposition but also enhances the project's reputation and operational success. Could Go Wrong? 1. Environmental groups may oppose the project due to perceived risks, delaying implementation. 2. Legal challenges might arise from insufficient mitigation measures, impacting timelines and budgets.	The project is in the planning stages, with feasibility studies and pilot deployments being prioritized. The focus is on linking modular refineries with the national grid and renewable energy sources while addressing challenges like energy loss and inefficient crude oil processing. Environmental risks have been identified but require detailed mitigation planning.	1. Conduct environmental impact assessments to identify potential risks from emissions and waste disposal. 2. Develop and implement robust mitigation strategies, including advanced filtration systems and waste recycling initiatives. 3. Engage with environmental groups and regulatory bodies to build trust and align on sustainable practices. 4. Establish transparent monitoring and reporting mechanisms to demonstrate environmental compliance and progress.	Modular refineries emit pollutants and generate waste during crude oil processing.	Failure to implement adequate mitigation measures for emissions and waste disposal.	Legal challenges and opposition from environmental groups could delay or derail the project, increasing costs and damaging reputation.	4	4 H-1 C-1 Q-1 S-1	16	Mitigate	#1 #2 #3	Make Environmental Impact Assessment for emissions and waste disposal. Implement advanced filtration systems and waste recycling initiatives. Establish transparent reporting mechanisms for Environment management.	David, Winter David, Winter David, Winter	13Mar25 13Mar25 13Mar25	Open Open Open	4	12	Asibong, Ime	23May26	Open	12Jan25 Modular refineries may face opposition from environmental groups if they are seen as contributing to pollution or environmental degradation. Failure to implement adequate mitigation measures for the environmental impact of refinery emissions and waste disposal could lead to legal challenges.
C00006	R8 Political / Government	Political Risks Affecting Energy Sector Projects	Changes in government policies or shifts in political leadership pose a significant risk to energy projects. Such changes can result in altered sector priorities, redirection of funding, or delays in project approvals. Additionally, political lobbying by stakeholders in the traditional energy sector may create opposition, slowing progress or influencing public perception against innovative energy solutions like the proposed project.	Ensure project continuity and funding regardless of changes in political or policy environments while addressing and mitigating opposition from vested interests effectively. Could Go Wrong? Policy changes or political shifts may reduce funding or stall approvals. Lobbying from traditional energy sector stakeholders could sway decisions, creating opposition that undermines the project.	The project is currently aligned with the existing political and policy frameworks, and no significant opposition has been formally identified. However, lobbying and potential political shifts remain latent risks.	1. Develop strong government and stakeholder engagement plans to maintain alignment with policy priorities. Establish coalitions with industry allies to counter opposition. 2. Prepare contingency plans to adjust project goals and secure alternate funding if necessary.	Changes in government policies or political leadership.	Shifts in energy sector priorities or increased opposition.	Disruption to project continuity, funding, or public support.	3	5 H-1 C-3 Q-1 S-5	15	Mitigate	#1 #2	Compile Stakeholder Engagement plan. Prepare contingency plans.	Harakat, Abubakr Inyang, Etido	13Mar25 13Mar25	Open Open	5	10	David, Winter	30Aug25	Open	12Jan25 Changes in government policies or political leadership could lead to shifts in energy sector priorities, which may affect the project's continuity or funding. The project could face opposition due to political lobbying from vested interests in the traditional energy sector.

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C00001	C3 Finance / Funding	Unanticipated cost increases.	Unanticipated increases in the cost of materials, labor, and technology pose a significant risk to project budgets. This issue is compounded by external factors, such as fluctuations in global commodity prices, especially for essential materials like steel and energy-related equipment. These challenges can disrupt financial planning and potentially compromise the project's overall viability if not adequately managed.	Maintain project costs within the approved budget, ensuring financial sustainability and the successful completion of the project without compromising quality or timelines. Could Go Wrong? Failure to address cost increases promptly could result in budget overruns, delayed project timelines, and a negative impact on the project's reputation and viability.	Global commodity prices for critical materials are showing volatility, and labor markets are experiencing wage pressures. There is no buffer in the current budget to absorb these fluctuations, making the project vulnerable to cost escalations.	1. Conduct a comprehensive risk assessment to identify cost-sensitive components. 2. Establish a contingency fund to cover unforeseen expenses. 3. Regularly monitor market trends for materials and labor costs. 4. Negotiate long-term contracts with suppliers to lock in prices. 5. Implement cost-control measures and explore alternative, cost-effective materials or technologies where feasible.	Unforeseen changes in the cost of raw materials, labor, or technology.	Budget overruns caused by price fluctuations or unexpected cost increases.	Financial strain on the project, potential delays, and a reduced likelihood of achieving project objectives.	3	3 H-1 C-3 Q-1 S-1	9	Mitigate	#1	Cost Risk Assessment.	David, Winter	11Mar25	Open	5	9	Inyang, Etido	31Dec25	Open	12Jan25 Unforeseen increases in the cost of materials, labor, and technology could lead to budget overruns, impacting overall project viability. •Fluctuations in global commodity prices, especially for materials like steel or energy related equipment, may increase project costs.
														#2	Establish Contingency Fund	David, Winter	11Mar25	Open						
														#3	Setup tracker for market trends.	David, Winter	11Mar25	Open						
														#4	Incorporate long-term fixed price contracts.	David, Winter	11Mar25	Open						
														#5	Setup Cost Control system	David, Winter	11Mar25	Open						
C00015	R6 Approvals / Permits / Licenses	Land Acquisition and Resettlement Challenges for Mini-Grids and Grid Infrastructure	Delays in acquiring land for the construction of mini-grids and grid infrastructure could arise due to legal disputes, ownership ambiguity, or inadequate compensation for stakeholders. Similarly, resettling populations affected by energy infrastructure projects might lead to conflicts or delays if the processes lack transparency, fairness, and adequate engagement with communities.	To ensure smooth land acquisition and resettlement processes by implementing equitable, transparent, and community-focused strategies that prevent delays and foster positive relationships with stakeholders. Could Go Wrong? Unresolved legal or compensation disputes could halt progress, while lack of fairness and transparency in resettlement might escalate conflicts, delaying project timelines.	Initial assessments indicate a high risk of disputes stemming from land acquisition and resettlement activities in identified project areas. Legal frameworks for resolving ownership issues exist but are cumbersome, often requiring prolonged resolution. Communities affected by resettlement remain skeptical about the fairness of compensation and relocation strategies.	1. Conduct comprehensive land assessments to identify potential legal and ownership issues early. 2. Engage legal experts to streamline resolution processes for disputes. 3. Develop a clear, transparent, and equitable resettlement framework that includes fair compensation and adequate community involvement. 4. Establish grievance redressal mechanisms to handle disputes efficiently. 5. Facilitate community meetings to build trust and ensure alignment with local stakeholders.	Ineffective planning and lack of stakeholder engagement in the processes of land acquisition and population resettlement.	Delays in acquiring land or executing resettlement due to disputes over legal ownership, compensation, or perceived unfairness in the process.	Prolonged project timelines, increased costs, and potential loss of community support, jeopardizing the project's successful implementation.	4	3 H-1 C-1 Q-1 S-3	12	Mitigate	#1	Conduct land assessments register.	Asibong, Ime	13Mar25	Open	4	9	David, Winter	21Feb26	Open	12Jan25 Delays in acquiring land for the mini-grids or grid infrastructure may occur due to legal disputes, ownership issues, or compensation concerns. Resettling affected populations in areas where new energy infrastructure is to be built could lead to conflicts or delays if not handled transparently and fairly.
														#2	Engage legal experts for standby on resettlement issues.	Asibong, Ime	13Mar25	Open						
														#3	Establish community meetings schedule.	Harakat, Abubakr	13Mar25	Open						
C00007	R3 Regulations	Barriers to Cross-Border Power Export from Nigeria	Disputes over regulatory requirements, tariffs, and operational procedures between Nigeria and neighboring countries pose significant risks to the success of cross-border power export initiatives. These disagreements can arise due to differences in governance, infrastructure readiness, or varying national priorities. Furthermore, challenges in harmonizing international transmission standards and legal frameworks can exacerbate delays and create uncertainty in energy agreements. These barriers threaten to undermine Nigeria's potential to emerge as a regional power exporter and could hinder economic benefits to all parties involved.	Achieve seamless cross-border power exports by addressing regulatory disputes, aligning international transmission standards, and ensuring timely resolution of energy agreement negotiations, fostering economic growth and regional cooperation. Could Go Wrong? Persistent disputes and delays could lead to failed agreements, financial losses, and missed opportunities for regional integration and economic growth.	Nigeria is actively pursuing opportunities to export power to neighboring countries to leverage its energy surplus. However, the regulatory landscape is fragmented, with varying national laws and tariffs causing delays. Current efforts to harmonize international transmission standards have yet to yield tangible results. Bilateral negotiations are ongoing but have experienced setbacks due to unresolved disputes and misaligned priorities among stakeholders.	1. Establish a multilateral task force involving Nigeria and neighboring countries to address regulatory disputes and tariff discrepancies. 2. Partner with international bodies to develop and implement standardized transmission protocols. 3. Facilitate transparent negotiations supported by mediation to expedite energy agreement resolutions. 4. Invest in capacity building for legal and technical experts to navigate international energy law and infrastructure requirements. 5. Monitor and evaluate progress through regular reporting and stakeholder engagement sessions.	Diverging regulatory frameworks, tariffs, and operational standards across Nigeria and its neighboring countries.	Delays and disagreements during the negotiation and implementation of cross-border energy agreements.	Hindered export of power, financial losses, and weakened regional energy cooperation.	3	4 H-1 C-1 Q-1 S-1	12	Mitigate	#1	Setup tariff regulation team.	Inyang, Etido	13Mar25	Open	5	8	Umoh, Camillus	22Nov25	Open	12Jan25 Disputes over regulatory requirements, tariffs, or operational procedures between Nigeria and neighboring countries could hinder the export of power. Issues related to international transmission standards and harmonization of laws may lead to delays in cross-border energy agreements.
														#2	Establish register of international bodies for power sharing.	Inyang, Etido	11Feb25	Open						
														#3	Establish register of Energy Agreements	Inyang, Etido	13Mar25	Open						

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C00011	R4 Infrastructure	Challenges in Integrating Decentralized Energy Systems with Nigeria's National Grid	Nigeria's energy sector faces significant challenges in modernizing its transmission and distribution infrastructure. As new modular refineries and mini-grids are integrated into the energy ecosystem, the national grid's capacity to handle decentralized energy sources is under scrutiny. Furthermore, the absence of modern equipment for grid monitoring, real-time analytics, and predictive maintenance exacerbates the risk of inefficiencies and delays in connecting new systems.	A robust, modernized grid infrastructure capable of seamlessly integrating decentralized energy systems, supported by advanced grid monitoring and analytics tools to enhance real-time decision-making and predictive maintenance capabilities. Could Go Wrong? Inadequate modernization of grid infrastructure could lead to systemic inefficiencies, increasing power outages and undermining public trust in the energy reforms. Delays in adopting advanced technologies may hinder the timely execution of the project and discourage investor confidence.	Nigeria's existing grid infrastructure struggles with inefficiencies, high transmission losses, and an inability to accommodate decentralized power sources effectively. Modern grid monitoring and analytics tools remain underutilized, leading to a lack of actionable insights for proactive maintenance and system optimization.	1. Conduct a comprehensive feasibility study to identify grid bottlenecks. 2. Prioritize investment in modern grid monitoring and analytics technologies. 3. Develop a phased grid modernization plan aligned with project timelines. 4. Engage stakeholders in workshops to promote the adoption of innovative practices. 5. Establish partnerships with international experts and financing institutions to facilitate knowledge transfer and funding for technology upgrades.	Insufficient investment and planning in grid modernization for decentralized energy systems.	Delays in connecting new modular refineries and mini-grids to the national grid due to outdated infrastructure and tools.	Reduced project efficiency, higher operational costs, and a slower realization of the project's benefits, affecting both national energy goals and regional trade opportunities.	4	4 H-1 C-3 Q-1 S-1	16	Mitigate	#1 #2 #3	Make a feasibility study to identify grid bottlenecks. Identify grid monitoring technologies. Stakeholder workshops for innovative practices.	Inyang, Etido Inyang, Etido Inyang, Etido	13Mar25 13Mar25 13Mar25	Open Open Open	2	8	Umoh, Camillus	15Nov25	Open	12Jan25 Nigeria's existing transmission and distribution infrastructure may be inadequate to handle the increased capacity and decentralized energy sources, leading to delays in connecting new systems. Lack of modern equipment for grid monitoring, real-time analytics, and predictive maintenance could slow project progress.
C00019	M1 Project Management	Coordination Challenges in Project Execution	Poor coordination among contractors, suppliers, and stakeholders poses a significant risk to project timelines and outcomes. Delays in construction, equipment procurement, or the commissioning of new facilities are likely consequences. Inefficient project management practices and communication breakdowns exacerbate the problem, leading to a lack of synchronization and a domino effect of inefficiencies. This issue impacts not only the immediate progress but also the reputation of the project and trust among involved parties.	A fully coordinated project execution framework where contractors, suppliers, and stakeholders work seamlessly, ensuring that all phases of construction, procurement, and commissioning are completed on time and within budget. Could Go Wrong? Failure to address coordination challenges could result in significant project delays, increased costs, and diminished stakeholder confidence, potentially jeopardizing the project's overall success.	The current project management environment lacks streamlined coordination and robust communication channels. Contractors and suppliers operate with limited synchronization, while stakeholders often experience delayed updates and unclear instructions. This has already caused minor delays, and further disruptions seem imminent unless addressed promptly.	1. Implement a centralized project management system to facilitate transparent communication and task tracking. 2. Assign dedicated project coordinators to monitor and align the efforts of contractors and suppliers. 3. Conduct regular progress review meetings with all stakeholders to identify and address potential bottlenecks early. 4. Establish clear protocols for communication and dispute resolution to ensure swift issue management. 5. Monitor performance metrics to evaluate the effectiveness of coordination efforts and adapt strategies as needed.	Lack of a unified project management system and clear communication protocols among contractors, suppliers, and stakeholders.	Delays in construction, equipment procurement, or commissioning due to misaligned schedules and poor information flow.	Extended project timelines, increased costs, and a loss of trust among stakeholders, ultimately compromising the project's success.	3	4 H-1 C-1 Q-1 S-4	12	Mitigate	#1 #2	Assign dedicated project coordinators for alignment of efforts of contractors and suppliers. Conduct regular Stakeholder meetings to address power bottlenecks.	Harakat, Abubakr Harakat, Abubakr	13Mar25 13Mar25	Open Open	3	8	Asibong, Ime	26Apr26	Open	12Jan25 Poor coordination among contractors, suppliers, and stakeholders could lead to delays in construction, equipment procurement, or commissioning of new facilities. Inefficient project management and communication breakdowns could result in missed deadlines and extended timelines.
C00023	C2 Market/Product	Impact of Global Energy Market Dynamics on Modular Refinery Project Viability	The profitability of modular refineries may be significantly influenced by fluctuations in global energy prices, especially in the oil and gas sectors. These changes can affect the cost of raw materials, the price of refined products, and the overall return on investment. Simultaneously, rapid shifts in renewable energy markets and advancements in green technology could reduce the long-term competitiveness and sustainability of the project. Such unpredictability presents a dual challenge: maintaining profitability in volatile oil markets while addressing the increasing global demand for renewable energy solutions.	To mitigate the impact of global energy price volatility and shifts in renewable energy markets, ensuring the modular refinery project remains profitable and attractive to investors while incorporating strategies to align with long-term sustainability goals. Could Go Wrong? 1. Severe price drops in oil and gas could make the refinery economically unviable. 2. Rapid growth in renewable energy adoption could reduce demand for fossil fuels, impacting the project's competitiveness.	The global energy market is characterized by high volatility, driven by geopolitical tensions, technological advancements, and shifting consumer preferences. While oil and gas prices have recently seen fluctuations, renewable energy markets are gaining traction with increasing adoption rates. The modular refinery project is currently in the planning stage, with profitability projections based on current market trends. Investor interest remains moderate, with concerns about long-term sustainability and profitability.	1. Conduct market analysis to monitor energy price trends and predict future shifts. 2. Develop flexible pricing models to adapt to energy market fluctuations. 3. Integrate renewable energy options into refinery operations, such as solar or biomass energy, to enhance sustainability. 4. Build strategic partnerships with investors aligned with both traditional and renewable energy sectors. 5. Implement risk mitigation strategies, such as insurance or hedging against price volatility.	Global energy prices are subject to volatility due to geopolitical, economic, and environmental factors.	Fluctuations in oil and gas prices and advancements in renewable energy technologies alter the energy market landscape.	Reduced profitability of modular refineries and diminished attractiveness to investors.	4	4 H-1 C-1 Q-1 S-1	16	Mitigate	#1 #2 #3	Conduct market analysis of price trends. Develop flexible pricing models. Integrate renewable energy options into refinery operations.	Asibong, Ime Asibong, Ime Inyang, Etido	13Mar25 13Mar25 13Mar25	Open Open Open	2	8	David, Winter	20Mar26	Open	12Jan25 Changes in global energy prices, particularly oil and gas, could affect the profitability of the modular refineries and reduce the attractiveness of the project for investors. Unpredictable changes in renewable energy markets could impact the project's competitiveness and long-term sustainability.

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C00025	R8 Political / Government	Risks to Cross-Border Power Exports	Cross-border power exports present significant opportunities for economic growth and regional integration. However, they also carry risks stemming from regional political instability or conflict in neighboring countries, which may disrupt power exports and result in financial losses or halted projects. Diplomatic tensions or disputes over energy pricing, tariffs, or regulatory standards further complicate these agreements, potentially leading to delays or export restrictions. Addressing these risks is essential to ensure the sustainability of cross-border energy initiatives.	Establish a robust framework for managing cross-border power exports that mitigates risks associated with political instability and diplomatic disputes, ensuring steady revenue flow and uninterrupted operations. Could Go Wrong? Failure to manage instability or disputes could result in project delays, significant revenue losses, or the termination of cross-border power agreements, negatively impacting economic growth and regional cooperation.	Existing power export agreements are subject to geopolitical risks and fluctuations in regional stability. While there are efforts to harmonize regulations, disputes over tariffs and energy pricing occasionally arise, and mechanisms for dispute resolution may not be sufficiently robust to prevent disruptions.	1. Develop a risk assessment and monitoring system for political instability in neighboring countries. 2. Strengthen diplomatic channels to proactively address potential disputes over tariffs, pricing, or regulatory standards. 3. Establish contingency plans, including alternative export routes and diversified customer bases. 4. Collaborate with regional organizations to promote regulatory harmonization and political stability.	Regional political instability or diplomatic disputes arise from geopolitical rivalries, unresolved conflicts, and divergent economic interests.	Political conflict or tariff disputes disrupt cross-border power exports.	Revenue losses, project delays, and reduced trust in cross-border energy agreements, impacting economic and regional development goals.	3	4 H-1 C-1 Q-1 S-1	12	Mitigate	#1 #2	Make risk assessment for political stability in neighbouring countries. Establish energy export route contingency plans.	David, Winter David, Winter	13Mar25 13Mar25	Open Open	3	8	Owodiong-Idemeko, Obong Ide O	28Mar26	Open	12Jan25 Regional political instability or conflict in neighboring countries may disrupt cross-border power exports and result in lost revenues or halted projects. Diplomatic tensions or disputes over energy pricing, tariffs, or regulatory standards with neighboring countries could lead to delays or export restrictions.
C00026	C2 Market/Product	Challenges in Cross-Border Energy Trade and Grid Interoperability in West Africa	Disputes over pricing models, contractual terms, and operational standards between Nigeria and other West African countries pose significant risks to cross-border energy trade agreements. Additionally, infrastructure-related challenges, such as the lack of interoperability or non-harmonized grid standards, threaten to delay Nigeria's integration with neighboring energy networks. These issues can undermine efforts to develop a unified regional energy market, impacting energy security, economic growth, and regional cooperation.	Nigeria establishes fair, transparent pricing and contractual frameworks that are acceptable to all parties while achieving harmonization of grid standards to enable seamless cross-border energy trade. The result is a robust, interconnected energy market in West Africa that fosters energy access, economic development, and regional stability. Could Go Wrong? Prolonged negotiations or an inability to reach consensus could result in stalled projects or failed agreements, leaving Nigeria isolated from regional energy trade benefits. Poor infrastructure integration could further exacerbate delays or lead to operational inefficiencies.	Nigeria is actively working on expanding its energy production and regional trade capabilities but faces challenges with neighboring countries in agreeing on terms and harmonizing technical standards. Existing grid infrastructure shows gaps in compatibility, and current negotiations with regional partners have highlighted differences in priorities and expectations.	1. Convene multilateral discussions focused on creating transparent and mutually beneficial pricing and operational agreements. 2. Establish a regional task force to address grid interoperability issues and develop common standards. 3. Leverage partnerships with international energy organizations to mediate disputes and provide technical expertise. 4. Invest in modernizing Nigeria's grid infrastructure to ensure compatibility with neighboring systems. 5. Pilot small-scale cross-border energy projects to build trust and demonstrate feasibility.	Divergent national priorities and lack of alignment on energy pricing models, contractual terms, and operational protocols.	Delays or breakdowns in cross-border energy trade agreements and grid integration projects.	Missed opportunities for regional energy collaboration, economic losses, and reduced progress toward energy security in Nigeria and West Africa.	4	4 H-1 C-1 Q-1 S-1	16	Mitigate	#1 #2 #3	Meet with energy clients for mutual beneficial pricing agreements. Establish a 'standards' think tank. Pilot small scale cross-border energy projects to build trust and test feasibility.	Asibong, Ime Asibong, Ime Asibong, Ime	13Mar25 13Mar25 13Mar25	Open Open Open	5	8	David, Winter	27Jun26	Open	12Jan25 Disagreements over pricing, contractual terms, and operational standards with other West African countries may reduce the success of cross-border energy trade agreements. Issues related to infrastructure interoperability or harmonization of grid standards could cause delays in connecting Nigeria's energy network to neighboring grids.
C00032	M1 Project Management	Risk Management	Identifying and mitigating risks (e.g., disruptions, technical issues, political instability).	Smooth execution with contingencies in place for disruptions. Could Go Wrong? Unforeseen events disrupt the summit, causing delays or cancellations.	Initial risk assessment done, but detailed plan needs preparation.	Develop a detailed risk management and contingency plan.	Lack of foresight or planning.	Risk manifests without proper contingency.	Stakeholder trust and event reputation are damaged.	4	4 H-1 C-1 Q-4 S-1	16	Mitigate	#1	Develop Risk Management and Contingency plan	David, Winter	11Feb25	Open	5	8	[Organiser], [Summit]	31May25	Open	12Jan25
C00033	M3 Communication	Communication and Publicity	Promoting the summit effectively to attract strong attendance and media coverage.	High turnout and positive media visibility. Could Go Wrong? Poor communication results in low attendance or negative publicity.	Initial announcements made, but comprehensive promotion needs to scale.	Engage PR teams and leverage multiple media channels for outreach.	Inadequate media planning or execution.	Low visibility and participation in the summit.	Missed opportunities for impact and stakeholder engagement.	4	4 H-1 C-1 Q-4 S-1	16	Mitigate	#1 #2	Engage PR teams. Engage media channels for outreach.	[Organiser], [Summit] [Organiser], [Summit]	11Feb25 11Feb25	Open Open	2	8	[Organiser], [Summit]	31May25	Open	12Jan25

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C00003	C7 Currency/Inflation	Impact of Naira Exchange Rate Volatility on Import Costs	Volatility in the Nigerian naira exchange rate poses a significant challenge to financial stability, especially in projects requiring imported materials and equipment. Fluctuations in the exchange rate can lead to unanticipated increases in costs, disrupting procurement and overall budgetary plans. The difficulty in securing favorable exchange rates compounds this issue, impacting long-term financial planning and the ability to meet project timelines.	Stabilize procurement costs by implementing effective currency risk management strategies to minimize the impact of exchange rate fluctuations on project budgets. Could Go Wrong? Prolonged currency instability may lead to project delays, reduced quality in materials procured, or complete budget overruns, jeopardizing project success.	The naira exchange rate has been increasingly volatile, with fluctuations influenced by global economic trends, oil price instability, and domestic fiscal policies. This has created uncertainty in the cost of importing essential materials, making financial planning more complex and less predictable for project stakeholders.	1. Identify and establish relationships with financial institutions offering currency hedging solutions. 2. Negotiate bulk exchange deals or forward contracts to lock in favorable rates. 3. Explore local sourcing options to reduce reliance on imported materials. 4. Develop contingency funds within project budgets to absorb currency-related cost variations.	Rapid shifts in the global economic landscape, combined with domestic challenges such as inflation, fiscal deficits, and reduced foreign exchange reserves, contribute to the volatility of the naira.	Unanticipated depreciation in the naira's value increases the cost of importing essential materials and equipment.	Increased costs strain financial resources, disrupt budget allocation, and potentially delay project implementation, leading to diminished stakeholder confidence and project outcomes.	3	3 H-1 C-1 Q-1 S-1	9	Mitigate	#1	Engage fiancial institutions for hedging	Owodiong-Idemeko, Obong Ide O	13Mar25	Open	3	6	Owodiong-Idemeko, Obong Ide O	31Jul26	Open	12Jan25 Volatility in the Nigerian naira exchange rate could impact the cost of importing essential materials and equipment. Difficulty in securing favorable exchange rates may affect financial planning and budget allocation.
														#2	Make bulk exchange deals with contractors.	Owodiong-Idemeko, Obong Ide O	13Mar25	Open						
														#3	Develop Contingency funds	Asibong, Ime	13Mar25	Open						
C00010	T2 Design / Eng.	Key Technology and Maintenance Risks in Modular Refineries and Minigrids Integration	The project to integrate power generation assets with modular refineries and minigrids in Nigeria relies heavily on the efficiency and reliability of key technologies such as renewable energy systems, grid management software, and smart meters. Additionally, maintaining operational consistency in modular refineries and minigrids is crucial for the project's success. These elements are fundamental for ensuring the seamless distribution of power, meeting national grid demands, and achieving export goals.	To establish a robust, technology-driven power network that mitigates risks of system failures and ensures continuous energy supply. Effective maintenance protocols will ensure modular refineries and minigrids operate efficiently to support urban, rural, and cross-border energy needs without significant interruptions. Could Go Wrong? Key technology failures or inadequate maintenance could lead to power interruptions, delays in project timelines, and reduced performance, undermining stakeholder confidence and project goals.	The project is in its planning phase, with significant emphasis placed on technological integration and infrastructure development. Existing challenges include potential equipment failures, insufficient maintenance plans, and the need for comprehensive monitoring systems. Stakeholders have identified risks but require a detailed mitigation framework.	1. Conduct a detailed feasibility study to assess technological vulnerabilities. 2. Implement predictive maintenance programs for all modular refineries and minigrids. 3. Establish a centralized PHC dashboard for real-time monitoring and risk assessment. 4. Train local teams in advanced maintenance techniques and system troubleshooting. 5. Introduce pilot programs to test and refine technology integration strategies.	Reliance on advanced but unproven renewable energy systems and the complexity of integrating modular refineries and minigrids with the national grid.	A critical system failure occurs, either due to equipment breakdowns or insufficient maintenance, resulting in disruptions to power supply.	Power outages and delays in project milestones lead to reduced reliability, increased costs, and potential loss of stakeholder support. This may jeopardize the project's ability to meet energy distribution and export goals.	3	3 H-1 C-1 Q-3 S-1	9	Mitigate	#1	Make a feasibility study to asses technological vulnerabilities.	Inyang, Etido	13Mar25	Open	3	6	David, Winter	28Mar26	Open	12Jan25 Failure of key technologies, such as renewable energy systems, smart meters, or grid management software, could delay project implementation or reduce performance. Equipment breakdowns or lack of proper maintenance in modular refineries or minigrids could cause power interruptions or system failures.
														#2	Establish real time PHC Service dashboard for monitoring of project concerns.	Harakat, Abubakr	13Mar25	Open						
														#3	Introduce pilot project for testing of integration strategies.	Inyang, Etido	13Mar25	Open						
C00013	M9 Health / Safety / Environment	Mitigation of Environmental Risks in Modular Refineries and Transmission Infrastructure Projects.	The integration of modular refineries and the construction of transmission lines aim to enhance Nigeria's energy capacity and distribution efficiency. However, non-compliance with environmental standards during these activities can lead to project delays, legal challenges, and penalties. Additionally, pollution risks from modular refineries could provoke local community opposition or stricter environmental regulations.	Ensure environmental compliance through proactive planning, stakeholder engagement, and robust mitigation strategies. Strengthen community relations and align project execution with international environmental standards to avoid disruptions. Could Go Wrong? Failure to meet environmental standards could result in significant project delays, financial penalties, and legal disputes. Community backlash or regulatory tightening might further disrupt operations.	The project is in the feasibility and regulatory planning phase, focusing on the deployment of modular refineries and mini-grids. Preliminary environmental assessments highlight potential risks tied to pollution and compliance issues. Stakeholder concerns, including local communities and environmental agencies, require detailed action plans to address these risks.	1. Conduct comprehensive environmental impact assessments for modular refineries and transmission projects. 2. Develop and implement stringent pollution control measures during construction and operation phases. 3. Engage local communities early to address concerns and build trust through transparent communication. 4. Collaborate with regulatory authorities to ensure alignment with environmental standards. 5. Monitor environmental performance in real time using PHC tools to preemptively resolve issues.	Insufficient environmental planning or oversight during the construction and operation phases of modular refineries and associated infrastructure projects.	Violation of environmental standards or pollution incidents occurring during project implementation.	Delays, fines, legal disputes, and potential project suspension; diminished community support and reputational damage.	3	3 H-1 C-3 Q-3 S-1	9	Mitigate	#1	Conduct Environmental Impact Assessment for all projects.	Asibong, Ime	13Mar25	Open	3	6	Umoh, Camillus	21Jun26	Open	12Jan25 Failure to meet environmental standards during the construction of modular refineries or the laying of transmission lines could result in project delays, fines, or legal disputes. Pollution risks associated with modular refineries may lead to local community opposition or stricter environmental regulations.
														#2	Develop pollution control plan.	Asibong, Ime	13Mar25	Open						
														#3	Establish liaison with local communities.	Asibong, Ime	13Mar25	Open						

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C00017	C2 Market/Product	Fluctuating Local and Export Energy Demand Impacting Mini-Grid Viability	Energy mini-grids, particularly in rural areas, face challenges due to varying local energy demand. This inconsistency can undermine profitability and financial sustainability. Simultaneously, lower-than-expected demand for electricity exports to neighboring countries, despite established regional agreements like the West African Power Pool (WAPP), could diminish revenue projections and weaken the justification for large-scale investment.	Ensure mini-grids achieve financial viability through accurate demand projections, adaptive management strategies, and diversification of revenue streams, with effective cross-border electricity trade to support economic sustainability. Could Go Wrong? 1. Mini-grids may operate below capacity, leading to financial strain. 2. Reduced electricity export demand could hinder ROI and strain cross-border partnerships.	Efforts are underway to integrate Nigeria's power generation assets into modular refineries and a network of mini-grids. Rural areas are targeted for reliable electricity supply via renewable energy mini-grids, linked to the national grid. However, there is inherent uncertainty in local demand forecasting and export agreements, as highlighted in project documents	1. Conduct granular demand studies for rural mini-grids and export markets to align capacity with actual needs. 2. Introduce tariff structures and incentives that accommodate demand fluctuations. 3. Develop bilateral and multilateral agreements to secure export demand. 4. Use the PHC Service for continuous monitoring, risk assessment, and adaptive planning.	Inconsistent local energy demand and unpredictable export market dynamics reduce mini-grid efficiency and profitability.	Mini-grids may face prolonged underutilization, while export markets could fall short of anticipated demand levels.	Financial losses, strained project justification, and potential setbacks in achieving project goals of regional energy integration and sustainability.	3	3 H-1 C-1 Q-3 S-1	9	Mitigate	#1 #2 #3	Make demand studies for rural mini-grids and export markets. Make agreements to secure export demand. Use PHC Service for continuous monitoring, risk assessment and adaptive planning.	Harakat, Abubakr Harakat, Abubakr David, Winter	13Mar25 13Mar25 13Mar25	Open Open Open	3	6	Harakat, Abubakr	19Sep25	Open	12Jan25 Fluctuations in local energy demand, especially in rural areas, could reduce the profitability of mini-grids, making them financially unviable. Lower-than-expected demand for exported electricity from neighboring countries could impact revenue projections and project justification.
C00018	C2 Market/Product	Risk of Competition and Obsolescence in Energy Projects	The proposed Thorium Reactor Generator project in Nigeria faces risks from both market competition and technological advancements. Competitors in the energy sector, such as large-scale solar farms or international renewable projects, may reduce the market share and profitability of Nigeria's energy exports. Additionally, rapid advancements in energy storage technologies, renewable energy efficiency, or grid management systems could render parts of the project less effective or obsolete before it is fully operational. These challenges necessitate strategic foresight to ensure project viability and competitiveness.	To establish a Thorium Reactor Generator project that remains viable, competitive, and technologically relevant by addressing market competition and leveraging adaptable, future-proof solutions. Could Go Wrong? The project could face reduced profitability or market demand due to competition. Technological advancements in other sectors could outpace the reactor's capabilities, leading to wasted resources or reduced stakeholder confidence.	The proposed integration of Nigeria's power generation with modular refineries and mini-grids is designed to enhance energy distribution and export capabilities. However, global energy markets are highly dynamic, with constant innovation and increasing competition in renewables and energy-efficient technologies	1. Conduct a comprehensive market analysis to identify and monitor competing energy projects. 2. Develop contingency plans, including potential integration with renewable energy sources. 3. Engage with technological research entities to stay updated on advancements in energy and grid technologies. 4. Establish partnerships with stakeholders to promote thorium's unique benefits, such as low waste and high energy efficiency. 5. Build flexibility into the project's design to accommodate potential technological upgrades or adaptations.	Increased investment in and adoption of renewable energy and technological innovations.	Emergence of superior competing technologies or projects in the energy market.	Reduced profitability and relevance of Nigeria's Thorium Reactor Generator project.	3	3 H-1 C-1 Q-1 S-1	9	Mitigate	#1 #2 #3	Make a market analysis to identify and monitor competinig energy projects. Establish partnerships to explore the potential for Thorium based Reactors for mini generators. Build flexibility into the project's design to allow for technological upgrades and adaptations.	Asibong, Ime David, Winter Inyang, Etido	13Mar25 13Mar25 13Mar25	Open Open Open	5	6	Inyang, Etido	20Dec25	Open	12Jan25 Competition from other energy projects, such as large-scale solar farms or international projects, could affect the profitability of Nigeria's energy exports. Rapid technological advancements in energy storage, renewables, or grid management could make parts of the project obsolete before completion.
C00021	M7 Operations / Logistics	Establishing Effective Operations and Maintenance Frameworks for Modular Refineries and Mini-Grids	The establishment of modular refineries and mini-grids offers significant potential for decentralized energy production and distribution. However, these systems face challenges in operations and maintenance (O&M), such as inadequate frameworks for ensuring efficiency, reliability, and collaboration among key stakeholders. Poorly defined O&M structures may result in operational inefficiencies, prolonged downtime, and diminished performance, ultimately affecting energy availability and cost-effectiveness.	The implementation of robust O&M frameworks that ensure modular refineries and mini-grids operate at peak efficiency, maintain minimal downtime, and achieve high-performance standards. Collaboration among stakeholders should facilitate seamless integration of power production and distribution, fostering a reliable energy supply for communities and industries. Could Go Wrong? 1. Persistent inefficiencies in system operations leading to excessive downtime. 2. Power distribution conflicts arising from poor stakeholder coordination.	Many modular refineries and mini-grids are in the early stages of development or operation. While they present promising energy solutions, current O&M practices are either inadequate or nonexistent, leading to inconsistent performance and strained relationships among operators, managers, and stakeholders. There is a lack of standardized protocols to guide O&M activities, further complicating system reliability.	1. Develop and implement comprehensive O&M frameworks tailored to modular refineries and mini-grids. 2. Facilitate training and capacity building for operators, managers, and other stakeholders. 3. Establish a coordination platform for all stakeholders to address power distribution issues collaboratively. 4. Implement performance monitoring tools to evaluate system efficiency and detect issues proactively. 5. Promote best practices and knowledge sharing within the industry.	nsufficiently developed or standardized O&M frameworks for modular refineries and mini-grids.	System inefficiencies, prolonged downtime, and performance shortfalls occur, hindering reliable energy supply.	Reduced energy availability, financial losses for operators, and diminished trust among stakeholders and end-users.	3	3 H-1 C-1 Q-1 S-1	9	Mitigate	#1 #2 #3	Develop Operation and Maintenance frameworks for modular refineries. Facilitate training and capacity building for operators, managers and other stakeholders. Implement performance monitoring tools to monitor system efficiency and detect Concerns.	Inyang, Etido Inyang, Etido Asibong, Ime	13Mar25 13Mar25 13Mar25	Open Open Open	5	6	Owodiong-Idemeko, Obong Ide O	14Jun26	Open	12Jan25 Challenges in establishing effective operations and maintenance (O&M) frameworks for modular refineries and mini-grids could result in system inefficiencies, increased downtime, or poor performance. Poor coordination between modular refinery operators, grid managers, and mini-grid operators could lead to power distribution inefficiencies or conflicts.

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C00022	C1 Feasibility/Business Case	Establishing Robust Maintenance and Asset Management Systems for Mini-Grids, Refineries, and Grid Infrastructure	The failure to implement effective maintenance systems and asset management plans for mini-grids, refineries, and grid infrastructure could lead to severe operational inefficiencies and system failures. Over time, neglected maintenance and poor asset management result in performance deterioration, increased operational costs, and reduced lifespan of critical infrastructure. This situation threatens energy security, economic viability, and reliability of essential services.	A well-structured, sustainable maintenance system and asset management plan are established to ensure the optimal performance, longevity, and cost efficiency of mini-grids, refineries, and grid infrastructure. Could Go Wrong? Delays or inadequate investment in maintenance and asset management could result in frequent equipment breakdowns, escalating costs, and loss of public confidence in the energy infrastructure.	Many mini-grids, refineries, and grid infrastructures are operational but lack comprehensive maintenance schedules and robust asset management plans. This has already led to sporadic inefficiencies and unplanned downtime, highlighting the need for a proactive strategy to address these gaps.	1. Develop and implement standardized maintenance protocols for all critical infrastructure components. 2. Establish real-time monitoring systems to track equipment performance and predict maintenance needs. 3. Train personnel on asset management best practices to mitigate obsolescence and prevent premature breakdowns. 4. Allocate adequate budgetary provisions for regular maintenance and upgrades. 5. Partner with industry experts and stakeholders to identify and address systemic challenges.	Lack of planning, investment, and expertise in developing and sustaining maintenance systems and asset management plans.	Equipment obsolescence or premature breakdown due to inadequate maintenance and poor asset management.	Reduced performance and reliability of infrastructure, leading to increased operational costs and compromised energy security.	3	3 H-1 C-1 Q-3 S-1	9	Mitigate	#1 #2	Implement standardazed maintenance protocols for critical infrastructure. Tran personnel on asset management best practices to mitigate obsolescence.	Inyang, Etido Inyang, Etido	13Mar25 13Mar25	Open Open	3	6	Harakat, Abubakr	15May26	Open	12Jan25 Failure to establish robust maintenance systems for the mini-grids, refineries, and grid infrastructure could lead to deterioration in performance over time, resulting in high operational costs. Lack of proper asset management plans may cause equipment obsolescence or premature breakdowns.
C00024	T2 Design / Eng.	Technological Obsolescence	The fast-paced evolution of energy storage, smart grid technology, and power generation presents both opportunities and risks for projects in the energy sector. While new technologies can enhance efficiency and sustainability, they may also render parts of an ongoing project obsolete if they are not adopted or integrated promptly. This concern highlights the need to monitor technological trends and assess their potential impacts on project development and implementation.	To ensure the project remains technologically relevant and competitive by continuously evaluating and incorporating advancements in energy storage, smart grid technology, and power generation as they emerge. Could Go Wrong? Parts of the project may become outdated, leading to inefficiencies, increased costs, and reduced competitiveness in the energy sector.	The project is under development and utilizes current technologies that meet the initial requirements. However, technological advancements are occurring rapidly, with emerging trends in energy storage and smart grids that may soon outstrip the project's capabilities if not anticipated and addressed.	Establish a dedicated technology-monitoring team to track advancements in energy-related technologies. Integrate an agile review process to assess the relevance of new technologies and plan for their adoption. Collaborate with industry experts and technology providers to remain at the forefront of innovation. Ensure flexible project design to facilitate the incorporation of cutting-edge technologies without major disruptions.	Rapid technological advancements in energy storage, smart grid technology, and power generation.	Failure to adopt and integrate emerging technologies during project development.	Obsolescence of project components, inefficiencies in operation, and competitive disadvantages in the market.	3	3 H-1 C-1 Q-1 S-3	9	Mitigate	#1 #2	Establish a dedicated technology-monitoring team. Build a register of industry experts and technology providers.	Inyang, Etido Inyang, Etido	13Mar25 13Mar25	Open Open	3	6	Asibong, Ime	25Jul26	Open	12Jan25 Rapid technological advances in energy storage, smart grid technology, and power generation may outpace the project's development, rendering parts of it obsolete. Failure to adopt cutting-edge technologies as they emerge may lead to inefficiencies and competitive disadvantages.
C00027	M2 Project Organisation	Stakeholder Participation	Ensuring participation of all key stakeholders with aligned objectives.	Comprehensive representation and alignment on project goals. Could Go Wrong? Key stakeholders may not attend, leading to gaps in decision-making or alignment.	Stakeholders identified, but confirmations may be pending.	Outreach through direct invitations, follow-up communications, and customized agendas.	Lack of timely coordination.	Stakeholders fail to confirm participation.	Missed opportunities for input and collaboration.	3	3 H-1 C-1 Q-1 S-1	9	Mitigate	#1 #2 #3	Compile invitation list. Track communications. Customise participation agendas.	[Organiser], [Summit] [Organiser], [Summit] [Organiser], [Summit]	11Feb25 11Feb25 11Feb25	Open Open Open	3	6	[Organiser], [Summit]	31May25	Open	12Jan25
C00030	T1 Project Scope	Technical Demonstrations	Effective demonstrations of energy integration solutions (e.g., modular energy).	Convince stakeholders of the project's feasibility and scalability. Could Go Wrong? Technical glitches or poorly executed demonstrations damage credibility.	Potential demonstration methods identified; tech rehearsals pending.	Conduct multiple rehearsals and have technical experts on-site.	Insufficient preparation or testing.	Demonstrations fail during the event.	Credibility and stakeholder confidence are negatively affected.	3	3 H-1 C-1 Q-1 S-1	9	Mitigate	#1 #2	Schedule rehearsals of technical presentaitons. Commit technical experts on-site.	[Organiser], [Summit] [Organiser], [Summit]	11Feb25 11Feb25	Open Open	3	6	[Organiser], [Summit]	31May25	Open	12Jan25
C00031	C3 Finance / Funding	Budget and Funding	Securing funding or sponsorships to offset summit costs.	Financial feasibility of the summit without compromising quality. Could Go Wrong? Budget overruns or lack of funding leads to compromised planning.	Estimated costs outlined; funding sources being explored.	Approach sponsors early with a compelling value proposition.	Delayed or insufficient funding commitments.	Funding gaps delay summit preparations.	Reduced quality or potential cancellation.	3	3 H-1 C-1 Q-1 S-1	9	Mitigate	#1	Develop value proposition for Sponsors.	Inyang, Etido	11Feb25	Open	3	6	[Organiser], [Summit]	31May25	Open	12Jan25
C00034	M2 Project Organisation	Cultural Sensitivities	Ensuring respect for local norms and regional infrastructure priorities.	Inclusive event that respects all cultural and regional considerations. Could Go Wrong? Perceived insensitivity damages stakeholder relationships or alienates key groups.	Awareness of cultural dynamics; no specific measures outlined yet.	Conduct cultural sensitivity training for the organizing team.	Lack of awareness or preparation.	Cultural misunderstandings during the summit.	Alienation of key regional stakeholders.	3	3 H-1 C-1 Q-1 S-1	9	Mitigate	#1	Conduct Cultural Sensitivity training for the organizing team.	Umoh, Camillus	11Feb25	Open	3	6	[Organiser], [Summit]	31May25	Open	12Jan25

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C00035	M2 Project Organisation	Security	Ensuring physical and cybersecurity for participants and event information.	A safe environment for all attendees and protected sensitive data. Could Go Wrong? Security lapses compromise attendee safety or sensitive data integrity.	Venue security assessed; detailed measures yet to be finalized.	Partner with professional security teams and IT specialists.	Inadequate security arrangements.	Breaches in physical or data security during the event.	Negative media coverage and participant distrust.	4	3 H-3 C-1 Q-1 S-1	12	Mitigate	#1 #2	Engage professional security team. Engage IT Specialists for communications.	[Organiser], [Summit] [Organiser], [Summit]	11Feb25 11Feb25	Open Open	2	6	[Organiser], [Summit]	31May25	Open	12Jan25
C00036	M3 Communication	Outcome Documentation	Capturing and sharing actionable outcomes, decisions, and commitments.	Clear post-summit action plans with documented stakeholder follow-ups. Could Go Wrong? Poor documentation leads to missed follow-ups or unfulfilled commitments.	No documentation framework in place yet.	Assign a dedicated team for live note-taking and post-summit reports.	Lack of planning for real-time documentation.	Decisions and actions are not recorded.	Reduced accountability and lack of momentum post-summit.	3	3 H-1 C-1 Q-3 S-1	9	Mitigate	#1 #2	Engage dedicated note taking team. Distribute post-summit reports.	[Organiser], [Summit] [Organiser], [Summit]	11Feb25 13Mar25	Open Open	3	6	[Organiser], [Summit]	31May25	Open	12Jan25
C00037	M8 Project Quality	Alignment with Project Goals	Ensuring summit outputs align directly with P004 project objectives and contribute to measurable progress.	Actionable outcomes that advance the P004 project's integration, grid upgrades, and stakeholder collaboration. Could Go Wrong? Misalignment results in disconnected outcomes and lack of stakeholder buy-in.	Broad alignment exists; detailed mechanisms need planning.	Map summit agenda and deliverables explicitly to P004 objectives.	Lack of clarity or focus during planning.	Summit fails to advance the project's key objectives.	Stakeholder dissatisfaction and reduced confidence in the initiative.	3	3 H-1 C-1 Q-1 S-1	9	Mitigate	#1	Compile summit agenda. [Latest: Explicitly to P004 Power Integration project objectives.]	[Organiser], [Summit]	11Feb25	Open	3	6	[Organiser], [Summit]	31May25	Open	12Jan25
C00009	T2 Design / Eng.	Integration Challenges for Decentralized Mini-Grids and Modular Refineries in Nigeria's Energy Sector	The integration of decentralized mini-grids and modular refineries with Nigeria's existing grid presents significant technical and operational challenges. These systems are designed to decentralize energy distribution, enhance grid reliability, and improve energy exports, but the inherent complexity of synchronizing diverse energy sources, including hydroelectric, gas, and renewables, creates risks of inefficiencies, grid instability, and power outages. Furthermore, linking these systems to the main grid without robust infrastructure and governance frameworks may exacerbate existing weaknesses.	Achieve a seamless integration of modular refineries and decentralized mini-grids into Nigeria's energy grid, enhancing reliability, reducing energy losses, and ensuring efficient coordination of resources to prevent power outages. Could Go Wrong? Poor technical synchronization and resource allocation could result in under-utilization or overloading of energy sources, leading to frequent outages, operational inefficiencies, and economic losses.	Nigeria's energy sector relies heavily on centralized power generation with limited grid penetration in rural areas. Modular refineries and mini-grids are proposed as transformative solutions to address inefficiencies, expand energy access, and enable regional energy exports. However, existing grid infrastructure is outdated, and coordination mechanisms for integrating these decentralized systems are inadequate.	1. Conduct a comprehensive feasibility study to assess technical, financial, and regulatory aspects of integration. 2. Upgrade grid infrastructure to support decentralized energy inputs while minimizing transmission losses. 3. Establish a governance framework through the Project Health Control (PHC) Service to monitor, optimize, and mitigate risks associated with integration. 4. Facilitate workshops and training for stakeholders to ensure alignment and build technical capacity. 5. Pilot modular systems in targeted rural and industrial zones to refine the approach before nationwide deployment.	The decentralized nature of mini-grids and modular refineries introduces complexity in coordinating power generation, distribution, and grid integration.	Uncoordinated integration efforts result in technical mismatches, overloading, and resource under-utilization across the energy network.	Grid instability and frequent power outages erode trust in the energy sector, discourage investment, and hinder economic development.	2	3 H-1 C-3 Q-1 S-1	6	Mitigate	#1 #2	Make a feasibilty study to assess project risks. Establish a governance framework within the PHC Service data systems.	David, Winter David, Winter	13Mar25 13Mar25	Open Open	2	3	Umoh, Camillus	21Mar26	Open	12Jan25 Integrating decentralized mini-grids and modular refineries into Nigeria's existing grid could pose technical challenges, leading to inefficiencies, grid instability, or power outages. Poor coordination between different power generation sources could result in overloading or under-utilization of resources.

ID Concern [reg.]	Category / Element	Risk Short Title	Description	Desired Outcome	Current Situation	Proposed Strategy	Risk (three-part) Statement			Current Risk			Response	Mitigating Action / Response					Manageability	Residual Risk	Risk Owner	Target Review Date	Close Date	Last Review Date / Notes
							Cause	Risk Event [uncertainty]	Consequence	Probability	Impact	Score (PxI)		ID	Action	Action Owner	Due Date	Close Date						
C00020	M4 Project Resourcing	Workforce Challenges for Modular Refineries and Mini-Grid Deployment	The successful deployment and operation of modular refineries and mini-grids rely heavily on a skilled workforce, including engineers, technicians, and other workers. Current gaps in expertise for these specialized areas may significantly impede progress. Additionally, the adoption of new technologies introduces the need for extensive training programs, which are costly and time-consuming. Addressing these challenges is crucial for ensuring the long-term viability and efficiency of the projects.	Establish a sustainable pipeline of skilled personnel to support modular refineries and mini-grid operations, minimizing delays and ensuring smooth technological transitions. Develop cost-effective training programs to upskill workers while maintaining budgetary constraints. Could Go Wrong? Delays in identifying or training skilled personnel could stall project timelines. Overburdened budgets from high training costs could lead to resource constraints, impacting other critical project components.	There is an existing shortage of skilled workers trained in operating and maintaining modular refinery and mini-grid technologies. Training programs are either unavailable or financially prohibitive for widespread implementation. Project stakeholders are exploring solutions, but no cohesive strategy has been established.	1. Partner with technical institutions and training providers to develop specialized programs. 2. Introduce apprenticeship schemes to provide on-the-job training. 3. Explore cost-sharing models with technology providers to subsidize training expenses. 4. Identify and incentivize skilled expatriate professionals to bridge the immediate skill gap. 5. Monitor training outcomes and refine programs for greater efficiency.	The workforce lacks specialized skills in modular refinery and mini-grid technologies due to limited exposure and training opportunities.	A shortage of trained personnel and high costs of training strain the project's operational and financial resources.	Project delays, increased operational costs, and potential compromises in the performance of modular refineries and mini-grids.	2	3 H-1 C-3 Q-1 S-1	6	Mitigate	#1	Establish register of technical insitutions and training providers.	Umoh, Camillus	13Mar25	Open	2	3	Harakat, Abubakr	18Jul26	Open	12Jan25 Insufficient availability of skilled engineers, technicians, or workers for modular refineries and mini-grid deployment could slow down project progress. High costs of training personnel to operate and maintain new technologies could strain the project's budget.
														#2	Introduce apprenticeship schemes.	Umoh, Camillus	13Mar25	Open						
														#3	Explore cost-sharing models with technology providers.	Asibong, Ime	13Mar25	Open						
C00028	M7 Operations / Logistics	Logistical Arrangements	Coordinating venue, travel, and accommodations for participants.	Seamless organization and comfort for all attendees. Could Go Wrong? Logistical failures or delays disrupt the summit experience.	Preliminary venue options reviewed, but no finalization yet.	Assign logistics team to manage bookings and contingencies.	Poor planning or budget constraints.	Participants face travel or accommodation issues.	Negative perception of event management.	2	2 H-1 C-1 Q-1 S-1	4	Mitigate	#1	Set up Logistics team for bookings.	Asibong, Ime	11Feb25	Open	3	2	[Organiser], [Summit]	31May25	Open	12Jan25
														#2	Set contingencies in to mitigate against no-show.	[Organiser], [Summit]	11Feb25	Open						
C00029	M1 Project Management	Agenda and Content	Structuring an engaging and informative agenda aligned with project objectives.	Well-received agenda that balances strategic discussions and technical insights. Could Go Wrong? Agenda may be too dense, too vague, or not aligned with stakeholder interests.	Key topics identified, but the schedule remains unfinalized.	Collaborate with stakeholders to develop and review agenda content.	Inadequate stakeholder consultation.	Disengagement or dissatisfaction with the summit content.	Lack of actionable outcomes or alignment.	2	2 H-1 C-1 Q-2 S-1	4	Mitigate	#1	Revie agenda content with stakeholders	[Organiser], [Summit]	11Feb25	Open	3	2	[Organiser], [Summit]	31May25	Open	12Jan25
C00004	C1 Feasibility/Business Case	Potential Delays in Payments for Power Exports	The project involves exporting power to neighboring countries or regional bodies. While agreements are in place, there is a risk of delayed payments due to factors such as administrative inefficiencies, political instability, or economic challenges in the importing regions. These delays could disrupt the project's financial stability, particularly its cash flow and profitability, impacting both operational continuity and long-term sustainability.	Timely and reliable payments from importing countries or regional bodies, ensuring steady cash flow for the project. Establish mechanisms that minimize risks of payment delays and maintain profitability to secure the project's viability and expansion. Could Go Wrong? Persistent delays in payments could lead to financial shortfalls, affecting the project's ability to meet operational expenses, repay debts, or reinvest in expansion.	Export agreements have been signed, and initial payments are on schedule. However, there are no robust guarantees or escrow mechanisms in place to ensure payment timelines are strictly adhered to by importing entities, raising concerns about future consistency.	Negotiate stricter payment terms with penalties for delays and consider implementing an escrow payment system. Conduct a creditworthiness assessment of importing entities and maintain a contingency fund to cover cash flow gaps. Establish a dispute resolution mechanism to handle payment disagreements efficiently.	Economic instability, administrative inefficiencies, or political challenges in importing countries or regional bodies.	Payments for exported power are delayed or deferred beyond agreed timelines.	The project experiences cash flow disruptions, potentially leading to operational delays, reduced profitability, or an inability to fulfill financial obligations.	1	1 H-1 C-1 Q-1 S-1	1	Mitigate	#1	Negotiate strict payment terms with penalties.	Inyang, Etido	13Mar25	Open	1	1	Owodiong-Idemeko, Obong Ide O	31Jan26	Open	12Jan25 Potential delays in payments from neighboring countries or regional bodies for power exports could impact the project's cash flow and profitability

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C00005	R3 Regulations	Regulatory Challenges and Bureaucratic Delays	Delays in acquiring necessary permits, approvals, and licenses from Nigerian authorities have the potential to stall project initiation timelines. Additionally, the absence of clear and standardized regulatory frameworks for modular refineries and mini-grids creates inconsistent compliance requirements, adding uncertainty and complexity to the project execution process. These challenges could negatively impact both the scheduling and the cost-effectiveness of proposed initiatives.	To establish a streamlined and predictable process for acquiring permits, approvals, and licenses, and to work towards the development or clarification of consistent regulatory frameworks for modular refineries and mini-grids. These measures should minimize delays, reduce compliance-related risks, and facilitate smoother project initiation and implementation. Could Go Wrong? Prolonged bureaucratic delays could result in significant project postponements, leading to increased costs and missed opportunities. Ambiguous regulatory frameworks could create conflicts during implementation, risking non-compliance penalties or project suspension.	Permit and approval processes are known to be time-intensive and subject to inefficiencies in Nigeria, often exacerbated by overlapping jurisdictional responsibilities. Regulatory guidelines for modular refineries and mini-grids are either undefined or vary across regions, leaving room for interpretation and potential disputes. These conditions present immediate hurdles for initiating and executing projects effectively.	1. Engage proactively with relevant government agencies to understand specific requirements and build relationships. 2. Advocate for a dedicated regulatory liaison within the project team to address compliance challenges swiftly. 3. Partner with local legal and policy experts to navigate existing regulatory landscapes effectively. 4. Promote collaboration with industry stakeholders to push for the creation of standardized frameworks. 5. Identify alternative strategies to mitigate delays, such as working on parallel preparatory activities during the approval process.	An inefficient and fragmented bureaucratic system coupled with inadequate or inconsistent regulatory frameworks for emerging industries like modular refineries and mini-grids.	Delays in securing permits, approvals, and licenses or inconsistent regulatory compliance requirements for modular refineries and mini-grids.	Postponed project initiation, increased costs, operational risks, and potential non-compliance disputes that may hinder project outcomes.	1	1 H-1 C-1 Q-1 S-1	1	Mitigate	#1	Establish committee of Government agencies.	Asibong, Ime	13Mar25	Open	1	1	Inyang, Etido	31Oct25	Open	12Jan25 Bureaucratic delays in acquiring permits, approvals, and licenses from Nigerian authorities could postpone project initiation. Lack of clear regulatory frameworks for modular refineries and mini-grids could result in inconsistent compliance requirements.
														#2	Establish Legal and Compliance team.	Asibong, Ime	13Mar25	Open						