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Ghana's US$200 Million Nuclear Readiness Commitment

A Critical Assessment of the 2027 National Budget and the Path to 2028

By Raymond Agalga | Nuclear Policy Analyst, Institute of Economic Affairs (IEA Ghana)

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Executive summary

Ghana's 2027 Budget proposes US$200 million for a 24-month nuclear-readiness programme running from January 2027 to December 2028. It targets completion of readiness and signature of an engineering, procurement, construction and financing contract for a fully state-owned nuclear baseload power plant by December 2028. The Budget explicitly states that readiness in 2028 does not mean electricity generation in that year. These are significant policy commitments, but they are not proof that the required funds have been released, that a plant is bankable, or that regulatory approvals have been obtained. [1]

The central public policy issue is how to turn a high-level financing envelope and political deadline into a sequenced programme of technical studies, institutional decisions, procurement safeguards, credible project economics and measurable outcomes. The proposed state ownership model intensifies the need for transparent fiscal-risk analysis because national control of the asset does not eliminate exposure to construction delays, debt service, exchange-rate volatility or electricity offtake risk.

The assessment recommends publication of a costed implementation plan, reconciliation of the US$200 million commitment with the annual appropriations and programme-based budgets, an explicit milestone and dependency register, transparent appraisal of ownership and financing options, and periodic public reporting. Regulatory independence and the distinction between technical readiness and commercial contract signature must remain non-negotiable.

Key messages

- The Budget sets a clear two-year financing envelope but does not, in the nuclear policy passage, provide an annual allocation or detailed funding-source schedule.
- The December 2028 target combines technical readiness with contract signature, which should be monitored as distinct achievements.
- The commitment to full state ownership creates a public-finance and corporate-governance question, not simply a question of who holds the shares.
- The announced training target of more than 2,000 scientists needs an occupational, competency and retention framework.
- Reported land acquisition, legislative preparation and vendor engagement are progress indicators, but they do not by themselves establish licensing, financial close or construction readiness.
- An evidence-led national readiness scorecard would make the two-year programme more transparent without intruding on the regulator's statutory functions.

1. What the 2027 Budget actually commits to

Paragraphs 374–81 describe a nuclear-readiness programme of US$200 million over January 2027–ecember 2028. The stated goal is to complete readiness and sign an engineering, procurement, construction and financing contract by December 2028. The Government identifies site studies, technology selection, environmental assessment, financing, licensing preparations, safeguards, emergency planning and the safety case as readiness elements. It further states that the plant will remain a strategic national asset, will not be developed as an independent power producer, and that international partners will provide technology, finance, engineering and specialist services. It commits to training over 2,000 scientists. [1]

Separately, paragraph 1291 reports ongoing land acquisition for two sites, submission of a Bill to establish the Nuclear Power Corporation of Ghana to Parliament, public sensitisation and international vendor engagement. These statements describe activities and policy intentions, not completed site approvals, enacted legislation or a selected reactor technology. [2]

Table 1. Key Nuclear Energy Commitments in Ghana's 2027 Budget and Evidence Required for Verification

Budget statement	Analytical meaning	Evidence still required
US$200m over 24 months	Multi-year readiness commitment	Funding sources, annual appropriations, releases and expenditure
Contract target: December 2028	Commercial milestone linked to readiness	Contract conditions, financial-close pathway and independent approvals
100% state ownership	Strategic public asset policy	Corporate governance, sovereign exposure and offtake model
More than 2,000 scientists	Human-capital ambition	Skills mix, training standards, deployment and retention
Two sites: land acquisition ongoing	Siting work in progress	Site suitability studies, community consultation and applicable approvals

Source: Government of Ghana, 2027 Budget Statement, paragraphs 374–381 and 1291; IEA policy analysis.

2. Budget credibility and expenditure traceability

The nuclear policy passage establishes a headline amount, but an investment-readiness programme needs a financial architecture that makes each dollar traceable to an activity, accountable institution and verifiable deliverable. The existence of an announced two-year envelope should not be conflated with a parliamentary appropriation, cash release, procurement commitment or completed work. A public reconciliation should identify the domestic and external financing components, currency assumptions, year-by-year cash requirements, funding conditions and any expenditure already committed through existing institutions.

A simple equal division of US$200 million produces US$100 million per year, or about US$8.33 million per month. This is a mathematical benchmark only: actual spending on nuclear infrastructure preparation is likely to be uneven, because major technical studies, site work and advisory assignments have different procurement and delivery schedules. An equal split should not be reported as the official annual allocation.

Recommended expenditure disclosure

"Nuclear investment readiness must be demonstrated through evidence, not merely declared through budget commitments."

Table 2. Proposed Financial Disclosure and Accountability Requirements for the US$200 Million Nuclear Readiness Programme

Disclosure item	Why it matters
Funding source and financing terms	Identifies budget, loan, grant and contingent-liability exposure
Annual and quarterly cash plan	Tests whether the schedule is executable
Activity-level cost estimates	Allows scrutiny of adequacy and duplication
Procurement method and contract status	Supports competition, integrity and value for money
Outputs and acceptance criteria	Connects spending to demonstrable readiness
Disbursements and variance explanations	Distinguishes plans from execution

Source: IEA policy analysis, informed by the IAEA Milestones Approach; evidence examples are indicative.

"The success of Ghana's US$200 million nuclear-readiness programme must be measured by verified outcomes, not expenditure alone."

The published institutional annexes contain nuclear-related entries, but annex line items may represent different accounting classifications and institutional nesting. They should not be aggregated as a single nuclear programme budget without the underlying programme-based estimates and appropriation schedules. The public should be given a reconciled nuclear expenditure statement that avoids double counting and distinguishes the separate readiness envelope from ordinary institutional operating allocations.

3. The economics of a state-owned nuclear power project

Full public ownership can support national strategic control and long-term planning. It does not determine whether the project will be affordable. Financing costs, construction schedules, operational performance, the exchange rate and the capacity of the electricity purchaser to pay will largely determine its fiscal and economic consequences. The ownership decision should therefore be followed by a transparent appraisal of financing structures that preserve the stated public ownership objective while testing their fiscal implications.

A useful appraisal should model the construction-period interest burden, debt-service profile, sovereign guarantees, currency mismatch, decommissioning and waste-management funding, fuel-cycle obligations, grid reinforcement and potential delay scenarios. It should also distinguish project capital cost from the preparatory US$200 million envelope. The latter is not a construction budget and should not be presented as one.

Illustrative financing sensitivity: why interest rates matter

For illustration, consider a hypothetical US$5 billion capital requirement financed over 25 years with equal annual debt payments, excluding construction-period interest, taxes and fees. At 4% annual interest, the annual payment is approximately US$320 million; at 8%, approximately US$468 million. The difference, about US$148 million per year, demonstrates the importance of financing conditions. These are not estimates for Ghana' project, whose design, size, construction cost and financing structure have not been established in the Budget.

The economic assessment should compare nuclear generation with realistic alternative power portfolios on a consistent system basis, including reliability, grid services, fuel-price exposure, carbon implications, storage and transmission needs. Technology comparisons are not meaningful if they apply different financing assumptions or omit integration costs.

4. The December 2028 milestone and the IAEA infrastructure sequence

The Budget properly distinguishes readiness from electricity generation. Nevertheless, the deadline contains several different kinds of

milestones: completion of studies, institutional capability, technology and site decisions, financing arrangements, and signature of a commercial contract. They should not be collapsed into one binary label of "ready"or "not ready."T he IAEA Milestones Approach provides an internationally recognised framework for introducing nuclear power through successive phases of national preparation, procurement and implementation. [3]

A credible readiness matrix should identify the decision being supported by each work product, the evidence standard, responsible institution, dependencies and validation status. For example, environmental assessment, site evaluation and the nuclear safety case interact, but each has its own legal and technical pathway. A signed EPC agreement may contain conditions precedent and cannot substitute for a regulator' independent licensing decision.

"A nuclear project becomes investment-ready through demonstrated institutional and technical preparedness, not merely through the signing of contracts."

Table 3. Nuclear Investment Readiness Dimensions and Illustrative Evidence of Completion

Readiness dimension	Illustrative verifiable evidence
Siting	Site investigations, alternatives analysis and applicable land/environmental processes
Technology	Documented requirements, evaluation criteria and procurement decisions
Environmental	Published assessment process and competent-authority decisions
Financing	Affordability appraisal, lender terms, risk allocation and financial-close pathway
Licensing preparation	Applicant capability, regulatory framework and submission readiness
Safeguards and security	Defined national responsibilities and implementation arrangements
Emergency preparedness	Roles, capabilities, coordination and tested planning arrangements
Safety case	Structured technical basis and regulator-facing documentation

Source: IEA policy analysis, informed by the IAEA Milestones Approach; evidence examples are indicative.

5. Institutional architecture and regulatory independence

Ghana' nuclear programme spans policy leadership, project implementation, research, technical support, electricity-system planning, environmental oversight and independent nuclear regulation. The proposed Nuclear Power Corporation requires a clear mandate and governance architecture that avoids overlap with existing programme organisations. The Budget' report that a Bill has been submitted should not be interpreted as evidence that the corporation is already legally established. [2]

The institutional framework should identify the owner-operator' legal obligations, shareholder oversight, procurement accountability, financing authority and responsibility for long-term liabilities. A commercially ambitious implementation schedule must not constrain the Nuclear Regulatory Authority' independent decisions. The NRA must be able to obtain the technical expertise, information and resources required for future nuclear power oversight while remaining institutionally separate from promotion and project delivery.

The role of GAEC and its constituent research and

training bodies should be assessed as part of a national capability system, not simply through isolated budget lines. Technical support, laboratory services, workforce education, safeguards expertise and emergency preparedness require coordinated but clearly delineated responsibilities.

6. Workforce development: from headcounts to capability

The proposed training of more than 2,000 scientists signals attention to local expertise, but a training headcount is an input indicator. A nuclear workforce plan must translate project phases into occupational requirements, professional standards, training routes, practical experience and institutional absorption. Scientists are only part of the workforce: technicians, engineers, project controls professionals, inspectors, security specialists and emergency responders are equally important.

Reporting should distinguish short-course attendance from professional qualification, competence demonstrated in practice and personnel retained in relevant institutions. A credible programme should also estimate the cost and timing of specialist overseas training, domestic education infrastructure and succession planning. Technology-transfer commitments should be evaluated against measurable skills and knowledge outcomes rather than broad partnership announcements.

7. Electricity-sector integration and affordability

Nuclear power is a system investment. The scale of a prospective reactor must be compatible with electricity demand, reserve requirements, grid stability, transmission capacity and credible long-term offtake arrangements. The economic case should be evaluated against a realistic range of industrial growth and electricity-consumption scenarios, not a single optimistic demand forecast.

The Budget' broader energy-sector financing challenges make payment discipline and utility financial health central to nuclear bankability. If the electricity purchaser cannot reliably recover costs or settle invoices, public ownership does not eliminate revenue risk; it can transfer that risk to the sovereign. A national nuclear financing strategy should therefore be integrated with electricity-sector financial reform, grid studies and a transparent tariff-affordability assessment.

8. Site selection, environmental integrity and public confidence

The Budget reports land acquisition for two sites as ongoing. Site acquisition, site suitability, environmental approval and nuclear licensing are separate processes. The public interest requires transparent explanation of their sequence, responsible authorities and opportunities for participation. A nuclear project may encounter serious delay if community concerns are treated as communications problems rather than substantive issues involving land rights, livelihoods, environmental impacts and trust.

Public engagement should begin before irreversible decisions and continue through the project lifecycle. Project promoters should provide accessible information, while regulators and environmental authorities retain their independent functions. Consultation should document concerns and responses, rather than merely counting public meetings.

9. Comparative lessons for Ghana

International nuclear programmes offer lessons but not ready-made templates. Egypt' El Dabaa development demonstrates the importance of comprehensive intergovernmental and financing arrangements and sustained state capacity. Türkiye' Akkuyu model illustrates that contractual arrangements can allocate ownership and delivery responsibilities very differently from Ghana' proposed state-owned structure. South Africa' experience highlights the importance of legal process, procurement credibility, affordability and institutional accountability in nuclear expansion decisions. These examples are qualitative comparisons, not evidence that any particular foreign financing terms or delivery outcomes can be transplanted directly to Ghana. [4–]

The central comparative lesson is that nuclear success depends on the fit between the chosen delivery model, the country' fiscal capacity,

electricity-sector institutions, regulatory system and implementation discipline. Ghana should therefore benchmark governance and risk allocation, not merely reactor size or headline contract value.

10. A public readiness and investment accountability framework

A useful accountability framework should monitor both expenditure and substantive readiness. It should report whether a milestone is planned, underway, completed, independently validated or blocked by a dependency. Missing public documentation should be classified as "ot publicly verified"rather than automatically as failure. The Ghana Nuclear Power Readiness Index' ten-pillar structure and the 39-question Phase II completion assessment can provide complementary levels of analysis: national trend monitoring and detailed evidence review, respectively.

"Every nuclear-readiness milestone must be measurable, every major expenditure accountable, and every claim of progress supported by verifiable evidence."

Table 4. Proposed Performance Indicators for Monitoring Nuclear Readiness and Investment Accountability

Indicator family	Suggested public measure	Frequency
Financing	Approved, committed, released and spent amounts; variance explanations	Quarterly
Technical readiness	Studies and deliverables completed against published acceptance criteria	Quarterly
Institutional	Mandates, staffing and capability gaps addressed	Semiannual
Regulatory	Preparedness indicators without prejudging licensing outcomes	Semiannual
Human capital	Competency-certified and deployed personnel, by occupation	Annual
Public engagement	Consultations, issues raised and documented responses	Semiannual
Investment decision	Contract status, conditions and financing milestones	At material decision points

Source: IEA policy analysis. Proposed indicators are illustrative and do not constitute an official government monitoring framework.

Such a framework should disclose methodological limits and provide source references. Its purpose is to support public accountability and better policy decisions, not to substitute for the statutory roles of implementing bodies, environmental authorities or the nuclear regulator.

11. Priority recommendations

1. Publish a costed two-year implementation plan

Government should specify work packages, deliverables, dependencies, responsible institutions and quarterly milestones.

2. Reconcile the US$200 million with fiscal documents

The Ministry of Finance and relevant implementing bodies should disclose financing sources, appropriations, releases and expenditure categories.

3. Separate technical readiness from contract signature

Progress reporting should distinguish completed

studies, procurement decisions, financial arrangements and independent regulatory processes.

4. Publish a state-ownership fiscal-risk assessment
The appraisal should examine debt service, sovereign guarantees, construction risk, offtake arrangements and long-term liabilities.

5. Clarify the proposed corporation' governance
Legislation and associated arrangements should define shareholder oversight, owner-operator duties, procurement accountability and institutional interfaces.

6. Protect regulatory independence and capability
Regulatory funding, specialist expertise and decision-making autonomy must keep pace with project development.

7. Adopt a competency-based workforce strategy
Training should be measured by qualifications, occupational need, deployment and retention, not participation alone.

8. Integrate nuclear plans with power-sector reform
Project appraisal should address grid requirements, demand uncertainty, utility finances and electricity affordability.

9. Strengthen site and community transparency
Public information should distinguish land acquisition, environmental decisions, site suitability and licensing.

10. Publish a periodic evidence-led readiness report
A public scorecard should link expenditure to verified outcomes and identify unresolved constraints without conflating missing evidence with failure.

Conclusion

The 2027 Budget creates an unusually clear opportunity to test Ghana' nuclear ambition against a time-bound financing and delivery programme. The proposed US$200 million commitment and December 2028 deadline should be judged by whether they produce verifiable technical, financial, institutional and public-interest outcomes. A state-owned nuclear plant can serve national development objectives only if its risks are transparently allocated, its economics withstand scrutiny and its regulatory foundations are sound.

The decisive policy question is not whether Ghana can announce a nuclear investment programme, but whether it can demonstrate that the project is ready to proceed responsibly. Public accountability, disciplined sequencing and evidence-based decision-making are therefore essential elements of nuclear investment readiness.

References and source notes

[1] Government of Ghana (2026). The New Economy, New Ghana, Jobs and Prosperity: 2027 Budget Statement, paragraphs 374–81, pp. 33–4.
[2] Government of Ghana (2026). 2027 Budget Statement, paragraph 1291, p. 159.
[3] International Atomic Energy Agency. Milestones in the Development of a National Infrastructure for Nuclear Power, Nuclear Energy Series NG-G-3.1 (Rev. 1), 2015.
[4] IAEA country and nuclear infrastructure materials concerning Egypt' El Dabaa nuclear power project (contextual comparison).
[5] Publicly documented Akkuyu project ownership and delivery arrangements (contextual comparison).
[6] South African nuclear procurement and energy-policy experience (contextual comparison).
Publication note: Comparative cases are included for institutional and financing context; no foreign cost or project-performance statistics are asserted without project-specific verification.

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