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Case Study: Nigeria Power Sector Reform

Tags: Investment, Infrastructure, Energy, Political Economy, Case Study



Despite being the largest economy in Africa, Nigeria is severely constrained by low quality, decaying infrastructure and inadequate power supply. Responding to these constraints DFID established the Nigeria Infrastructure Advisory Facility (NIAF), a demand driven technical assistance programme to support more Phase 1 ran from November 2007 to November 2011 (£32.6 million). NIAF II continued the support with an budget of £100.35 million until December 2016. A successor, UKNIAF, is currently in procurement.

NIAF provided advisory services to the Federal Government of Nigeria (FGN) to improve infrastructure planning and implementation. Power sector reform and sector performance improvement have been the largest part of NIAF given the transformative effect that increased, reliable and affordable power supply can have on the economy. As part of DFID Nigeria's (DFID-N) wider strategy, NIAF also addresses climate change and poverty reduction and economic growth in northern Nigeria.

NIAF 1 and 2 used the facility model. This means the programme was comprised of many sub-projects, and is run by one service provider which managed operations via a Programme Management Unit (PMU) in Nigeria. The guiding principles for effective programme delivery of NIAF 1 and 2 were:

- **Demand-driven:** each project under the facility starts with a clear request from a client;
- **Results-focused:** projects have a specific, time-bound, and measurable objective, ensuring the PMU deploys appropriate resources in response to demand;
- **Accountable:** each project has its own client, terms of reference, team, and budget, each of which can easily be held accountable to the PMU on a project level; and
- **Greater than the sum of its parts:** because all the individual projects are selected, managed, and evaluated under a singular logical framework (the logframe), the projects are consistent, coherent, and aligned to the client's overall objective.

This case study focuses on the opportunities and challenges of the facility model in providing flexible technical assistance (TA) to support power sector reform in Nigeria, and on the key success factors and lessons learned.

The NIAF Programme

In 2005, FGN embarked on privatization of its power sector, with the aim of transforming Nigeria into one of the world's 20 largest economies by 2020.¹ One of FGN's strategic objectives was to ensure the **power sector is able to efficiently deliver sustainable adequate, qualitative, reliable and affordable power in a deregulated market**. Supporting this vision was at the core of NIAF 1 and 2 since with on average 40% of budget allocated to this workstream – fluctuating in response to political economy. In particular, NIAF assisted FGN in: i) privatizing power generation and distribution companies through a transparent and competitive process following the unbundling of the sector; ii) establishment of a functioning electricity market, and iii) improving volume and reliability of power delivery².

Technical Assistance was deployed within NIAF using the facility model through a mix of embedded advisors and short-term experts (See Annex II, Table 1). **Advisors are embedded four days of the week into their relevant counterpart Ministries, Departments and Agencies and one day of the week is spent in the NIAF office**. This ensures that while developing an informed understanding of government priorities and building close working relationships with their counterparts, the work of the embedded advisors is clearly aligned to NIAF's agenda, and enables them to participate in internal discussions and knowledge sharing. This creates a positive feedback loop ensuring that NIAF strategy is well aligned and its priorities up to date. Embedded advisors are typically aligned to senior NIAF advisors who set the strategy, help in planning client activities and act as a mentor and sounding board. All embedded consultants are part of a strong support structure provided by the NIAF team. This includes a formal reporting framework with progress updates and access to senior sector specialists that help address specific problems.

Theory of Change

NIAF's expected impact is to **support FGN with increasing non-oil based economic growth, ultimately leading to poverty reduction** by reducing infrastructure constraints to growth and increasing employment.³ Within the power sector workstream, on the outcome level, improved power reliability and quality will have a positive effect on businesses, households and social centres leading to increased economic growth (and ultimately poverty reduction) through the following pathways:

- **Businesses:** reduced energy and operational costs as a result of adequate and reliable power will lead to increased productivity, increased investment eventually generating employment with also indirect effects across the supply value chain;
- **Households:** additional appliances, reduced costs and time savings as a result of adequate and reliable power will result in an increase of disposable income and eventually to job creation;
- **Social Centres:** improved service provision, increased investment and reduced energy and operational costs as a result of adequate and reliable power will lead to enhanced educational and health achievements.

See Annex IV, Figure 2, for NIAF's power sector theory of change (ToC).⁴ The outputs as stated in the NIAF logframe are linked to the percentage of additional energy generated by private companies and sent to the grid, quantum of gas supplied, additional investment into generation, additional investment into transmission network, establishment of a market for electricity, DisCo payment performance, reduced number of system collapse, number of solar PPAs signed and transmission project delivery the amount of DisCos⁵ privatised.

Monitoring and Governance Arrangements

NIAF's main monitoring tools comprised of two logframes:

- A **dynamic logframe** is adjusted on a bi-annual basis on advice from a Technical Review Panel (TRP) – see below for details, to reflect relative success / failure against the milestone over the previous scoring period, and in line with political buy-in and reform opportunity. Milestones are rated on a 1-5 scale (where 3 is meeting expectations) to account for the flexibility of the programme, which a strict pass and fail score would not do. The raw score is adjusted for NIAF's 50% achievement target using a formula which produces an overall "final" score of between 1 and 10.

¹ Power sector reform forms a core of Nigeria's Vision 20:2020, targeting electricity generation of 35,000MW by 2020.

² ICF, *Formative Evaluation of NIAF II*, 2015.

³ Power Sector Impact is "Perception of daily hours of electricity availability". NIAF's impact is non-oil economic growth.

⁴ This section uses the theory of change developed during the NIAF poverty assessment in 2015 for the NIAF power workstream.

⁵ A large part of NIAF's work revolved around privatisation of power generation and distribution companies GenCos and (DisCos)

- A **more static Annual Review (AR) logframe** with firmer targets, reviewed once annually during AR process and scored along DFID's internal A++-C scale. **The programme is deemed successful should it achieve at least an A in 50% of interventions.** This provided the team with the confidence to bet on some risky interventions with the safeguard to 'fail' half of the time.

NIAF's outputs would be located on the outcome level of other comparable programmes and are **symptomatic of the level of ambition of the programme**. The logframe is supplemented by a Results-Based Funding Structure (RBFS) that provides an innovative approach in linking payments to results achieved. Scoring is based on the semi-annual assessment of the TRP. TRP assessment is designed to mitigate disputes between DFID and the service provider as well as prevent cherry picking easy wins. The system worked well in focusing attention on achieving outputs. Despite the usual challenges around wording and interpretation of targets donor and service provider broadly shared delivery risk in equal measures.

The TRP played a critical role in the governance of the programme and in guiding and monitoring programme performance. The TRP consisted of several sector experts that reviewed progress against the logframe every six months and suggested corrective actions. The TRP provided considerable value in identifying challenges hindering workstream progress and by providing high quality strategic advice to NIAF and DFID.⁶ A key success element was the **stable composition** (same senior experts) of the TRP. This allowed individuals to gain a deep understanding of NIAF activities and associated operating environment. However the burden that <5 annual reviews placed on NIAF clients led the team to propose one desk based review and one interview based review once a year – to reduce consultation fatigue for partners and clients.⁷

Evidence of economic development contribution

NIAF has been successful in promoting the power reform agenda, including the privatisation of generation and distribution companies. There is also evidence of increased capital spending in the power sector, which has resulted in a progressive increase in power output, and displacing inefficient and expensive power from diesel generation.⁸ A NIAF study has furthermore found that the increase of power sent into the grid from 2014 to 2015 has caused a 2.2% electricity price decrease for manufacturing firms. This lower electricity price has caused a 0.20% larger manufacturing output associated with a 0.13% growth of GDP and created 23,300 jobs. Each additional MW of additional availability of grid power is associated with NGN 309 million and 63 jobs⁹.

However, major challenges in Nigeria's power sector remain, including a lack of financial sustainability due to long-standing indebtedness and continuing regulatory risk. **The politics of the power sector,** i.e. competing spheres of influence, silos amongst power agencies, delays in appointments to key positions by the Presidency, **still impede progress.** Furthermore, the impetus for **reform in the power sector is inextricably linked to the fortunes of the nation and outside the control of the programme. Yet, they have a significant bearing on the programme's objective measures of success.** Observers might argue that the **electricity situation in Nigeria has** deteriorated in the past two years with a worsening macro-economic climate due to falling oil prices, gas shortages as a result of a sabotage and deterioration in system reliability.

Despite the fact that **such factors generally put a brake on momentum in the overall reform process and lengthen the period before the benefits of structural reform are fully realised,** NIAF has **contributed in laying the underlying foundations for improved economic growth.** Therefore, when macroeconomic conditions improve and the fundamentals in the power sector are in place - for example the introduction of competition – it will deliver increased benefits to consumer and DisCos/GenCos will be able to attract private investment quickly and ramp up power production.

During the last two years of NIAF DFID-N's increased pro-poor and gender and social inclusion (GESI) focus resulted in NIAF putting more emphasis on measuring its impact on pro-poor economic growth and related GESI features. However, as **poverty and GESI issues were often retro-fitted into workstreams instead of forming a strategic priority from the onset** it was difficult for NIAF to identify pro-poor client demand and

⁶ Nigeria Infrastructure Advisory Facility (NIAF) II, 2016a: Information from NIAF 2 programme staff sourced through a series of interviews and email exchanges October 2016.

⁷ NIAF, 2016a

⁸ ICF, 2015

⁹ Nigeria Infrastructure Advisory Facility (NIAF) II, 2015a: Revised NIAF Gender and Social Inclusion (G&SI) Strategy.

obtain traction from government for possible pro-poor project interventions¹⁰. As a result, **proposed actions and consequently the results could not be realistically expected or measured within the programme.**

Addressing climate change has formed part of NIAF's work from the onset. In the power sector, NIAF is expected to **reduce Nigeria's national greenhouse gas emissions** by improving the generation energy mix¹¹. However, **results of NIAF's efforts to mainstream climate change were mixed.** The TRP commented that "*it is disappointing that after more than four years, NIAF has not been able to mobilise any climate change related funding*". Nevertheless, NIAF made progress in assisting FGN to shape its strategic direction by development sector-based roadmaps. In addition, NIAF's work on gas flaring was deemed as the most effective way of reducing Nigeria's greenhouse gas emissions.¹²

Innovative features of the TAF VGF scheme

The NIAF Power workstream shows innovative features in the delivery of TA that have contributed to the reform processes. These can be summarised as follows:

- a) **Demand-led through a close alignment with Government's reform agenda** capitalizing on political impetus;
- b) **Thorough understanding of the political economy (PE) of Nigeria's power sector;**
- c) **Flexible and responsive** programme that **addresses the entire market chain** (whole systems approach) using a larger pool of expertise – the venture capital approach;
- d) **Long-term engagement with active DFID involvement.**¹³

NIAF's **close alignment with the reform agenda, for instance via partnerships with** apex reform bodies such as the Presidential Task Force on Power & Advisory Power Team **across successive governments kept the programme relevant.** High level political buy-in was probably the most important success factor and enabled the considerable technical expertise within NIAF to effectively support the reform process and deliver the anticipated interim results in terms of a transformed institutional framework for the sector.

NIAF has been **highly successful in integrating PE of the energy sector** and over the years it has managed that a variety of different actors reached consensus on the energy reform process. This has been done through peer-to-peer influencing, high-level engagements in key areas (presidential task force) and targeted advocacy efforts. At present, opposing views to the privatisation of Nigeria's power sector are few and two successive governments, the private sector and large parts of the electorate stand behind the reforms. In support of this the TRP concludes in its final mission that – Nigeria's power sector without NIAF would probably look worse¹⁴. Moreover, NIAF has further innovated by **making use of Nigeria's large diaspora community** to gain a deeper understanding of the operating environment. Through increased cultural and political room to manoeuvre, the diaspora consultancy pool has contributed significantly to NIAF's success.

Much of NIAF's success in responding to the complex institutional landscape in the power sector has been the ability of the programme to be **flexible and adjust its strategy and resourcing quickly**- that are essential key elements of the facility model (See Annex I: What is a facility model and why choose one?) This model responds to a '**venture capital approach**', whereby NIAF invests its staff resources in interventions that promise high returns and retaining the flexibility to exit interventions if benefits do not materialise. Key innovative elements of the NIAF model are as follows:

- **Flexibility:** breaking large programmes into a sequence of smaller projects allows the client and PMU to adjust to changes in the context, capture opportunities, or shut down underperforming activities;
- **Speed: the PMU can mobilise technical assistance immediately;**
- **Scalability:** once projects have demonstrated results, with a large programme and a pool of experts, the PMU can easily scale up or replicate successful work, cancel or shorten low performing projects, and start new projects in response to client demand of changing conditions; and
- **Expertise:** by capturing an economy of scale in delivery, facilities can access a deep and wide pool of technical experts who can be deployed for specific tasks and circumstances.

¹⁰ NIAF, 2016a

¹¹ NIAF II, *Report of the Technical Review Panel (TRP) Final Report*, Review No. 9, 2016.

¹² *Ibid.*

¹³ This section is mainly based on correspondence with NIAF staff (NIAF 2016a) and findings of the ICF review (ICF 2015).

¹⁴ NIAF TRP, 2016.

This approach has enabled NIAF to work with newly-established institutions outside the mainstream of line ministries, often involving engagement of private sector finance or service delivery agents (e.g. the Central Bank of Nigeria has emerged as an influential player in Nigeria's Power Sector) that are agents of change. This meant that NIAF is able to **respond to opportunities quicker** than being overly reliant on a specific pre-selected reform partner. The flexible logframe allowing for failure was another element that facilitated the implementation of this venture capital approach.

Finally, the close proximity of DFID Nigeria to NIAF's strategy through approval of Terms of Reference (TOR) and almost daily meetings was another key enabler of success/innovative feature. Programme staff, including DFID advisors, has been largely consistent over a number of years. The DFID-N infrastructure advisor maintained a close relationship with the programme throughout and added value through his proximity to FGN and the issues at stake.

Conclusions*

NIAF key innovations and implicit lessons' learned in the implementation of NIAF I and II have been described above. The following section focuses on some of the challenges associated with implementing a facility model. Three key lessons stand out:

- **Ensure programme sustainability by developing exit strategies:** NIAF's biggest asset, its political awareness and influence can also become its biggest threat to success, undermining the sustainability of the programme. Central to NIAF's strategy to influence decision making was to embed advisors at the heart of a number of agencies this is to some extent resulted in **'creative tension' with the need to exit support at the end of the programme**. Long term advisors run the risk of creating and exacerbating donor dependency. The TRP in its final evaluation report acknowledges the deliberate efforts NIAF has made towards increasing the sustainability of some initiatives through a strategy to transfer skills from donor supported advisors and consultants into government counterparts, such as identifying institutional owners for its reform agenda.
- **Plan for skills transfer:** NIAF offers **training and workshops for external counterparts** – often facilitated by the embedded advisors. This includes off-site knowledge building sessions for key stakeholders i.e. Nigerian Senators and House Representatives. NIAF has predominantly selected **young, well-educated and motivated embedded advisors** often drawn from the diaspora. The young advisors can bridge the divide between local knowledge and international best practice. They are well accepted by their peers and can draw on the NIAF knowledge to up-skill their civil servant counterparts. The second model is to **pair junior-mid-level national energy professionals with senior expatriate power sector expertise**. This combination of support ensures advice is delivered effectively and lands with clients. There is also a process for **formal transfer of knowledge documents, improving internal FGN processes** such as ongoing market and sector monitoring activities as well as **NIAF's participation and input into planning sessions of FGN's yearly operational strategies**, and informal knowledge transfer in support of these objectives.
- **Mainstreaming cross-cutting themes early in programme design:** Opportunities have been lost by attempting to retro-fit cross-cutting themes (G&I and C&E) into programmes after their delivery has commenced. In order to more effectively address these themes, DFID programmes should consider how relevant risks and opportunities are integrated in infrastructure interventions from the earliest design stages. This includes ensuring that **resources required to address each theme are included in the fee structure**, including staff and consultant time.

** This section draws mostly on input from interviews with NIAF staff conducted in October 2016 and the TRP final evaluation report (NIAF TRP, 2016)