
What did IDEV evaluate?

Independent Development Evaluation carried out an evaluation of the support provided by the AfDB to the energy sector over the twenty-year period 1999 to 2018. During the period, the Bank devoted close to USD 18 billion to more than 300 interventions in its Regional Member Countries (RMCs). The sector accrued about 19% of overall Bank commitments over this period, ranking third in terms of the Bank’s total assistance to Africa (after multisector and transport). The evaluation aimed to help the Bank to account for its investments in the energy sector and learn from its experience so as to inform future strategic and operational directions for the Bank’s assistance to the sector, through the New Deal on Energy for Africa (NDEA), and contribute to improving the performance of the sector in its RMCs.

What did IDEV find?

**Relevance**

The Bank’s support to the energy sector in Africa over the twenty-year period, 1999-2018, was found to be relevant for addressing the challenges in the sector. The objectives of the Bank’s energy sector strategic documents (policies, strategies, and initiatives) focus on enhancing equitable energy access, securing supply, and alleviating the impact of climate change for sustainable, green, and inclusive socio-economic growth and development in Africa. These objectives as well as those of the sector’s operations are aligned to RMCs’ priorities and the Bank’s corporate and sector policies and strategies, and targets in the AfDB’s Ten-Year Strategy (2013-2022).

The quality of the Bank’s 2012 energy policy was found comparable to that of other Multilateral Development Banks (MDBs), with the Bank’s interventions adding value in the areas of (i) private sector participation, (ii) climate change, and (iii) regional cooperation. However, the design of the Bank’s energy sector projects was generally found unsatisfactory, due to shortcomings in some critical areas like risk assessment and long-term sector planning.

**Effectiveness**

Overall, the evaluation found that the Bank’s 1999-2018 energy sector operations are effective. They delivered and sometimes exceeded the expected outputs (See Table 1). The achieved outputs are: i) construction of physical infrastructure such as dams, power stations, and transmission and distribution lines; ii) installation of electromechanical equipment and monitoring instruments; iii) provision of institutional support such as engineering services and environmental and social impact mitigation measures; and iv) implementation of various studies.
The operations led to an increase in the supply of and access to electricity through power generation and cross-border exchanges. However, the operations sometimes failed to increase the reliability of electricity services. Also, progress towards reducing electricity tariffs in the RMCs was limited. The use of renewable energy did not make a significant impact on electricity tariffs. Access to energy in Africa remains low and progress towards access-for-all is slow. Improving governance of the sector is still challenging, with weaknesses in RMCs’ regulatory frameworks. Those weaknesses stem from the absence of comprehensive energy policies, which restrict the potential of tariff reforms.

The Bank’s interventions did not always contribute to increasing the affordability of energy services to end-user beneficiaries, especially to the poor. The Bank’s use of non-lending activities – such as institutional strengthening and technical training – to support the achievement of project outcomes was relatively limited, although effective when employed. Furthermore, the Bank also missed some opportunities to provide non-lending policy and technical assistance support that could have contributed to the success of operations.

**Efficiency**

The delivery of the Bank’s energy sector operations over the twenty-year period was found to be inefficient. The evaluation noted delays and cost overruns that compromised projects’ performance and posed the main threat to project efficiency, with power interconnection projects accounting for the bulk of delays. There were also slippages in implementation schedules due to delays in loan/grant effectiveness and changes in project design. However, between public and private sector projects, the latter experienced only moderate delays. It is important to note that over 2009-2018, delays for energy sector projects declined substantially, to an average of eleven months, compared to the earlier period (1999-2008) when the average was 47 months. Variations in cost, overruns or underruns, also affected project implementation. Private sector operations experienced a high average percentage of cost variation (24%) compared to public sector operations (10%).

**Sustainability**

The evaluation examined five aspects of sustainability: economic and financial sustainability, technical soundness, institutional and capacity strengthening, ownership and sustainability of partnerships, and environmental and social sustainability. Overall, the sustainability of achievements of energy sector interventions was judged to be likely, although the precarious financial sustainability of the sector threatens the long-term sustainability of the results that were achieved. In addition, institutional and capacity-strengthening sustainability was also, to some extent, challenging. Most of the projects that were sampled (93%) were technically sound. Performance was also positive on beneficiary ownership and sustainability of partnerships, and environmental and social sustainability. This is likely due to environmental sustainability having been featured strongly in the design of energy sector projects. The likelihood of long-term maintenance of electricity infrastructure was associated with the strength of the utilities’ business model. The Bank’s support to RMCs for assessing, mobilizing, and protecting resources for the recurrent costs of infrastructure maintenance was uneven across projects.

**Table 1: Summary of the Main Project Outputs Achievement**

<table>
<thead>
<tr>
<th>Indicators</th>
<th>No. of operations</th>
<th>Aggregate Planned</th>
<th>Aggregate Actual</th>
<th>Difference</th>
<th>Aggregate delivery rate</th>
<th>Share of projects with more than 75 percent achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total km of Distribution lines</td>
<td>20</td>
<td>27,344.00</td>
<td>30,605.26</td>
<td>3,261.26</td>
<td>112 percent</td>
<td>85 percent</td>
</tr>
<tr>
<td>Total km of Transmission lines</td>
<td>20</td>
<td>6,844.40</td>
<td>6,687.92</td>
<td>156.48</td>
<td>98 percent</td>
<td>90 percent</td>
</tr>
<tr>
<td>Total installed Capacity added (in MW)</td>
<td>21</td>
<td>7,397.00</td>
<td>7,558.54</td>
<td>161.54</td>
<td>102 percent</td>
<td>95 percent</td>
</tr>
<tr>
<td>Total Renewable Energy Installed Capacity added (in MW)</td>
<td>9</td>
<td>2,186.00</td>
<td>2,168.00</td>
<td>-18.00</td>
<td>99 percent</td>
<td>100 percent</td>
</tr>
<tr>
<td>Distribution substations and transformers constructed or rehabilitated</td>
<td>36</td>
<td>9,053.00</td>
<td>11,577</td>
<td>2,524</td>
<td>104 percent</td>
<td>86 percent</td>
</tr>
<tr>
<td>Production in GWh</td>
<td>15</td>
<td>46,933.18</td>
<td>44,901.85</td>
<td>2,031.33</td>
<td>96 percent</td>
<td>87 percent</td>
</tr>
</tbody>
</table>

*Source*: Calculated by IDEV, based on Bank internal databases.

Assessment of the implementation of the NDEA

The NDEA (2016-2025) is a partnership-driven effort with the ambitious goal of achieving universal access to energy in Africa by 2025. The evaluation found that the current level of Bank funding allocated to the NDEA, although increased since its launch, is insufficient to meet its targets. Initially, the Bank’s reorganization to deliver the High 5s also led to challenges in designating human resources to implement the NDEA. This was addressed through the creation of the Power, Energy, Climate, and Green Growth Complex in 2016 and the recruitment of new staff. The AfDB’s initial strategy for the NDEA put partnerships at its heart, and there is some evidence of the AfDB coordinating donor activities to achieve the NDEA’s objective with some specific initiatives. Furthermore, the Bank has been successful in bringing more partners and donors into existing platforms and facilities such as the Sustainable Energy Fund for Africa, a multi-donor fund managed by the AfDB. However, the AfDB’s pool of partners across the RMCs has a poor understanding of the NDEA, and stakeholders in RMCs appear not to be fully aware of the NDEA. Finally, there are no processes in place to regularly track progress against the NDEA objectives or systematically address areas of underperformance.

What did IDEV recommend?

1. The Bank should improve the quality of NDEA management, measurement, and reporting of results.

2. The Bank should strengthen its assistance to regional member countries to enhance their capacity to formulate and implement comprehensive energy policies, which encompass long-term power development plans, energy security strategies, and energy efficiency and conservation plans.

3. The Bank should increase support to regional member countries, through its power utility transformation program, to enhance the performance of their power utilities and ensure the financial sustainability of the power systems.

4. The Bank should increase its funding to regional member countries and to the private sector for sustainable energy access in Africa in priority areas.

What was the methodological approach?

Summative and formative approaches were used to conduct the evaluation. A summative approach was used to assess the completed projects, mostly those approved between 1999-2015. This approach allowed the evaluation team to draw conclusions about past performance, to inform ongoing and future energy sector efforts. The evaluation design used a combined theory-based approach and a system-based approach, with the standard international evaluation criteria. For projects that were ongoing at the time of the evaluation, mostly those approved since the adoption of the NDEA (2016), a formative approach was used. This allowed assessment of the overall quality of the NDEA strategy. The assessment reviewed the AfDB’s activities across the energy sector, since the launch of the NDEA strategy, to evaluate the extent to which the strategy is reflected in those activities. The assessment also considered the design process and quality of the NDEA as well as the adequacy of the institutional arrangements in place to deliver the deal.

What did Management respond?

Management welcomed IDEV’s evaluation of the Bank’s assistance to the energy sector from 1999 to 2018. It found IDEV’s evaluation timely, as Management will soon initiate its mid-term review of the Bank’s Strategy for the New Deal on Energy for Africa. Also, as part of the recent Seventh General Capital Increase and the Fifteenth Replenishment of the African Development Fund, the Bank is pursuing several new commitments in the energy sector: i) enhanced energy policy dialogue, ii) scaled-up access to electricity through on-grid and renewable-based decentralized energy solutions, iii) transition to increased renewable energy generation, iv) more attention to energy efficiency, and v) stronger regional power transmission interconnectors, power pools, and trading.
Independent Development Evaluation (IDEV) at the African Development Bank carries out independent evaluations of Bank operations, policies and strategies, working across projects, sectors, themes, regions, and countries. By conducting independent evaluations and proactively sharing best practice, IDEV ensures that the Bank and its stakeholders learn from past experience and plan and deliver development results to the highest possible standards.

About IDEV

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