

**Validation Report**  
January 2022

# The Lao People's Democratic Republic: Greater Mekong Subregion Northern Power Transmission Project

Reference Number: PVR-830  
Project Number: 38628-022  
Grant Number: 0195



*Raising development impact through evaluation*

## ABBREVIATIONS

|         |  |
|---------|--|
| ADB     | – Asian Development Bank                     |
| EDL     | – Électricité du Laos                        |
| EIRR    | – economic internal rate of return           |
| FIRR    | – financial internal rate of return          |
| KEXIM   | – Export–Import Bank of Korea                |
| km      | – kilometer                                  |
| kV      | – kilovolt                                   |
| Lao PDR | – Lao People’s Democratic Republic           |
| O&M     | – operation and maintenance                  |
| PCR     | – project completion report                  |
| PMU     | – project management unit                    |
| PPMS    | – project performance monitoring system      |
| RRP     | – report and recommendation of the President |
| WACC    | – weighted average cost of capital           |

## NOTE

In this report, “\$” refers to United States dollars and “KN” refers to the Lao kip.

|                                |   |
|--------------------------------|---|
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## PROJECT BASIC DATA

|                               |  |   |                          |                        |
|-------------------------------|--|---|--------------------------|------------------------|
| Project number                | 38628-022  | PCR circulation date                      | 29 July 2021             |                        |
| Grant number                  | 0195   | PCR validation date                       | Jan 2022                 |                        |
| Program name                  | Greater Mekong Subregion Northern Power Transmission Project |   |                          |                        |
| Sector and subsector          | Energy   | Electricity transmission and distribution |                          |                        |
| Strategic agendas             | Inclusive economic growth<br>Regional integration            |   |                          |                        |
| Safeguard categories          | Environment  |   | B                        |                        |
|                               | Involuntary resettlement                                     |   | B                        |                        |
|                               | Indigenous peoples   |   | C                        |                        |
| Country                       | Lao People's Democratic Republic                             |   | Approved<br>(\$ million) | Actual<br>(\$ million) |
| ADB financing<br>(\$ million) | ADF: 20.00   | Total project costs <sup>a</sup>          | 65.32                    | 60.51                  |
|                               | OCR: 0.00  | Grant                                     | 20.00                    | 19.98                  |
|                               |  | Borrower <sup>b</sup>                     | 7.44                     | 7.38                   |
|                               |  | Beneficiaries                             |                          |                        |
|                               |  | Others                                    |                          |                        |
| Cofinancier                   | KEXIM  | Total cofinancing                         | 37.88                    | 33.15                  |
| Approval date                 | 26 Jan 2010  | Effectiveness date                        | 23 May 2010              | 23 Nov 2010            |
| Signing date                  | 24 Feb 2010  | Project completion date                   | 30 Jun 2014              | 31 Dec 2019            |
|                               |  | Financial closing date                    | —                        | 22 Dec 2020            |
| Project officers              | D.T. Bui   | Location                                  | From                     | To                     |
|                               | P. Phommachanh   | ADB headquarters                          | Jan 2010                 | Nov 2011               |
|                               | P. Chanthirath   | LRM                                       | Dec 2011                 | Dec 2013               |
|                               | V. Inthavong   | LRM                                       | Jan 2014                 | Mar 2017               |
|                               | J. Hakim   | LRM                                       | Mar 2017                 | Apr 2018               |
|                               | V. Inthavong   | LRM                                       | May 2018                 | Dec 2019               |
|                               |  | LRM                                       | Jan 2020                 | Dec 2020               |
| IED review                    |  |   |                          |                        |
| Director                      | N. Subramaniam, IESP   |   |                          |                        |
| Team leader                   | A. Guha, Evaluation Specialist, IESP <sup>c</sup>            |   |                          |                        |

— = no approved financial closing date, ADB = Asian Development Bank, ADF = Asian Development Fund, IED = Independent Evaluation Department, IESP = Sector and Project Division, KEXIM = Export-Import Bank of Korea, LRM = Lao Resident Mission, OCR = ordinary capital resources, PCR = project completion report.

<sup>a</sup> Numbers may not sum precisely because of rounding.

<sup>b</sup> Electricité du Laos financed the government counterpart.

<sup>c</sup> Team members: H. Hettige (quality reviewer), F. De Guzman (Senior Evaluation Officer), P. Choynowski and C. Mason (consultants).

## I. PROJECT DESCRIPTION

### A. Rationale

1. From 2000 to 2008, the domestic demand for electricity increased at an average of 14% per year. The central region around Vientiane accounted for almost 90% of total electricity consumption, while the poorer southern and northern regions accounted for the remaining 10%. Most of the electricity demand was met by domestic production and some by electricity imports. Household electrification also grew steadily from 19% in 1996 to 58% in 2008. The Power Development Plan for 2007–2016 envisioned a fourfold increase in electricity demand from 350 megawatts in 2006 to 1,216 megawatts in 2015 and electricity consumption from 1,700

gigawatt-hours to 7,000 gigawatt-hours.<sup>1</sup> This entailed upgrading and expansion of the transmission and distribution network.

2. The transmission and distribution network of Électricité du Laos (EDL) was fragmented, comprising three separate 115 kilovolt (kV) transmission subsystems. The Nam Ngum 1–Nam Leuk–Nam Mang 3 115 kV system served Vientiane capital, Louangphrabang, Xaignabouli, Xiangkhouang, and provinces in the central region. The Khammoune 115 kV system imported power from Nakhon Phanom in Thailand to supply Thakhek and its surrounding areas. Savannakhet's 115 kV system imported power from Thailand to supply Savannakhet province. The absence of a strong and reliable transmission and distribution network in the country led to the need to import expensive electricity. EDL's transmission and distribution network did not cover the entire country. The lack of a unified transmission and distribution network made electrification in Lao People's Democratic Republic (Lao PDR) among the lowest of the Association of Southeast Asian Nations. Poverty was widespread and electricity was not accessible to households.

## **B. Expected Impact, Outcome, and Outputs**

3. The project's envisaged impact in the design and monitoring framework was to achieve the government's goal of rural electrification in 2020.<sup>2</sup> Its planned outcome was increased household access to electricity in the northern part of the Lao PDR. There were four targeted project outputs. First, the construction and operation of new 115 kV transmission lines; construction of new substations and expansion and operation of existing substations; and build–and–operate 22 kV feeder lines and low voltage distribution networks in Phongsali, Vientiane, and Xaignabouli provinces. Second, the provision for connections of poor households through no-interest credit of KN700,000 per household. Third, the preparation of a draft strategy framework on energy efficiency and renewable energies and a national strategy for hydropower utilization. Fourth, the increased access to the two-way power trade between EDL and the Electricity Generating Authority of Thailand.

## **C. Provision of Inputs**

4. The project was approved in January 2010, became effective in November 2010, which was 6 months later than expected, and the grant closed in December 2019, 5.5 years later than expected. The Asian Development Bank (ADB) approved four grant extensions. EDL's inadequate project readiness and weak project management capacity and initial setbacks in recruiting the project implementation consultants, who were to help with the bidding preparations and evaluations, plus the contractor's lack of in-country experience contributed to the delay. Procurement of civil works packages was delayed for similar reasons.

5. The project's total cost was \$65.32 million at appraisal, including physical and price contingencies, taxes and duties, interests, and other charges during implementation. The government requested a grant of \$20 million from ADB's special funds resources to finance parts of the project's first component. The Export–Import Bank of Korea (KEXIM) provided \$37.88 million to finance the other parts of the first component. EDL was to finance \$7.44 million

<sup>1</sup> EDL. 2007. *Power Development Plan*. Vientiane.

<sup>2</sup> ADB. 2009. *Report and Recommendation of the President to the Board of Directors: Proposed Asian Development Fund Grant for the Greater Mekong Subregion Northern Power Transmission Project in Lao People's Democratic Republic*. Manila.

to cover land acquisition and resettlement costs, taxes and duties, and interest during construction.

6. The actual total project cost was \$60.5 million. ADB funds were fully utilized for construction works, consulting services, and the credit scheme for poor households. However, cost overruns required the reallocation of ADB financing for the 74.6 kilometers (km) transmission line. Residual ADB grant savings were reallocated to project implementation consultant services and for the construction of 22 kV lines, where KEXIM funds were insufficient. Of the \$37.88 million loan from KEXIM, \$33.15 million was used for the construction of three transmission lines, a substation, and consulting services. The government counterpart financing totaled \$7.36 million. There was a substantial cost overrun for clearing unexploded ordnance and pathfinding, mainly due to the construction of a new transmission line. The government financed the increase, along with \$2.16 million to construct 22 kV distribution lines.

7. An international consulting firm was the project implementation consultant that helped EDL. This work involved procurement of goods and services; construction and installation supervision; system final testing and commissioning; social and environmental assessment, management, and monitoring; strengthening EDL capacity for social and environmental assessment, management, and monitoring; project performance monitoring and evaluation; and project reporting. The firm was to deliver 175 person-months of consulting services (80 person-months by international experts and 95 person-months by national experts). The project was also to recruit a procurement expert from the Republic of Korea to assist EDL in preparing part of the bidding documents, in particular, the invitation for bids and contract documents following KEXIM procurement guidelines, evaluation of bidding proposals, and other technical support related to the bidding process. A senior international energy policy advisor was to be engaged to provide support on strategic policy issues related to energy sector development in the Lao PDR.

8. A project implementation consultant and six individual consultants were recruited to support the Ministry of Energy and Mines in preparing a draft strategy framework on energy efficiency and a national strategy for hydropower utilization. The civil works components financed by KEXIM started just as the project implementation consultant contract was ending. As a result, EDL recruited five individual consultants to help the project management unit (PMU) with project management, technical issues related to transmission lines and substations, social safeguard and compensation monitoring, and environmental monitoring. The project completion report (PCR) did not provide information on the actual person-months utilized.<sup>3</sup> There was no attached technical assistance.

9. The project was categorized B for environment. The transmission lines did not cut across any protected forest or critical natural habitat nor caused any significant environmental impacts. Incidents identified during implementation included poor slope protection for transmission line towers, insufficient height of transmission lines, and unhygienic conditions and poor solid waste management at worker camps. The project was categorized B for involuntary resettlement. A resettlement plan was prepared in June 2014 following the resettlement framework prepared during project appraisal and was updated based on the detailed engineering design. The project was categorized C for indigenous peoples although impacts on some ethnic minority peoples were identified in the summary poverty reduction and social strategy appendix of the report and recommendation of the President (RRP). The project was categorized with some gender elements, but no gender action plan was prepared.

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<sup>3</sup> ADB. 2021. *Completion Report: Greater Mekong Subregion Northern Power Transmission Project in Lao People's Democratic Republic*. Manila.

## **D. Implementation Arrangements**

10. EDL was the executing agency for the project. A PMU was to serve as the implementing agency with assistance from EDL's provincial branch offices and was to be responsible for overall project implementation planning, budgeting, finance planning, and accounting; consultant recruitment; supervision and coordination of detailed project design; and procurement of goods and services. It was also to spearhead the implementation, supervision, and commissioning of all project components, including administration of the no-interest credit scheme to poor households, implementation of environmental impact mitigation measures and resettlement plans, organization of the project performance monitoring system, and preparation of periodic project progress reports and PCR.

11. Each provincial branch of EDL was to appoint staff to assist the PMU in project implementation. The staff was to be responsible for local liaison and coordination with contractors, processing household connections, and local site supervision. It would also be responsible for the supervision of project construction and commissioning and updating data relating to project progress monitoring, contractor performance, and financial reports. District and provincial authorities were to assist in various resettlement planning and implementation activities.

12. The implementation arrangements agreed during project design remained during implementation. EDL provided overall project administration oversight and the PMU coordinated day-to-day activities. EDL's provincial branches appointed sufficient staff to assist the PMU. District and provincial authorities assisted in various resettlement planning and implementation activities.

13. Of the project's 30 covenants, 24 were fully complied with, five were partly complied, and one was not complied with. EDL did not comply with the targets for the self-financing ratio, debt-service coverage ratio, and debt-equity ratio. The PCR did not explain the reason for noncompliance of financial covenants, nor the steps taken by ADB to ensure compliance. Although EDL did not submit the semi-annual social safeguard monitoring reports from 2013–2017, it did so from 2017 onwards. The covenant on the midterm review was partly complied with due to the delay in fielding it with only ADB participating. The covenants related to social safeguards were also partly complied with as weak initial social monitoring delayed identification of resettlement problems. These were later resolved by implementing a corrective action plan. Project management and safeguards delays were the other covenants partly complied with.

## **II. EVALUATION OF PERFORMANCE AND RATINGS**

### **A. Relevance of Design and Formulation**

14. The PCR rated the project relevant. The project was an integral part of ADB's Lao PDR country strategy and program (2007–2011) and was strategically aligned with the priorities of the Sixth National Socio-Economic Development Plan, 2006–2010 to increase electrification rates and reduce poverty.<sup>4</sup> Project activities to connect the Lao PDR's power system with Electricity Generating Authority of Thailand to facilitate cross-border power trade were appropriate and mutually beneficial, given that Thailand was an energy deficit country and the Lao PDR had an

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<sup>4</sup> ADB. 2009. *Country Strategy and Program Midterm Review: Lao People's Democratic Republic, 2007–2011*. Manila; and Government of the Lao People's Democratic Republic, Committee for Planning and Investment. 2006. *National Socio-Economic Development Plan (2006–2010)*. Vientiane.

expanding power surplus. The project's advisory work on energy efficiency, renewable energy, and efficient utilization of hydropower resources prepared the country for further development of the energy sector. Access to reliable and affordable electricity, improved energy efficiency, development of hydropower, and power trade were relevant at project appraisal and completion.

15. Except for the omission of one output indicator (substation at Xaignabouli), the PCR considered the design and monitoring framework appropriate. Given the weak capacity of EDL, particularly in safeguards implementation and construction supervision, the investment project modality was suitable. The project's main design weaknesses were the overambitious implementation period, partly attributable to inadequate project readiness, and incomplete social safeguards planning. Social safeguard designs initially underestimated the social impacts, omitted compensation requirements, and proposed unsuitable mitigation measures such as voluntary land donations. This validation finds these as minor issues, given that implementation schedules are generally difficult to establish accurately, and the social safeguard issues did not detract from the project's overall rationale.

16. This validation assesses the project relevant. The project was aligned with ADB's country strategy for the Lao PDR, 2007–2011 and the Lao PDR's Sixth National Socio-Economic Development Plan, 2006–2010 (footnote 4). It addressed the development constraint of inadequate transmission and distribution investment in the electricity network and was consistent with the government's and ADB's development priorities of reducing poverty through rehabilitation and construction of infrastructure for better basic services provision, including access to electricity.

## **B. Effectiveness in Achieving Project Outcomes and Outputs**

17. The PCR rated the project effective. It indicated that the project achieved or exceeded its outcome targets. A total of 24,095 households were connected to the power system by December 2019, including 8,832 poor households. However, this validation notes that the outcome target was originally scheduled to be completed by 2013. Also, this validation observes that on a per substation basis, electrification on two substations fell short of the targets while the other two substations greatly exceeded their targets. Of the three indicators for output 1, two targets were achieved, albeit with delays while the other output indicator did not meet its target. The achieved targets comprised two new substations, the extension of two existing substations, and the construction of 22 kV lines (1,116 km) from four substations. Of the original target of 398 km of 115 kV lines, only 312 km (78%) were constructed. The output 2 target of no interest credit to the poor was exceeded by about 47% but with delay. The targets for outputs 3 and 4 were also achieved with delays. The draft strategy papers were prepared and the targeted increase in power trade between the Lao PDR and Thailand was exceeded.

18. The project was correctly categorized B for environment and for involuntary resettlement, in compliance with ADB's Safeguard Policy Statement (2009).<sup>5</sup> Its possible adverse effects on transmission tower construction were moderate in nature. The transmission line alignment mostly traversed highly impacted lands with few environmental risks. Risks and impacts were primarily associated with construction phase activities and were considered manageable. At appraisal, the initial understanding was that the project would have limited adverse impacts on individuals and communities and that most affected people would not be impacted in a substantial way. At completion, less than 5 hectares of land was acquired, and no individuals were displaced. The project was categorized C for indigenous peoples. According to the

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<sup>5</sup> ADB. 2009. *Safeguard Policy Statement*. Manila.

assessment at appraisal, there were no adverse impacts on ethnic minority groups in the project villages other than impact on land acquisition. However, the project area was inhabited by 11 ethnic minority groups. The project's environmental assessment and the initial resettlement plan identified these communities as among the vulnerable and disadvantaged groups, especially related to land acquisition. A few provisions were made in the resettlement plan to address concerns and special needs of ethnic minorities. The project achieved all outcomes and outputs, and safeguard issues were satisfactorily resolved. Therefore, this validation assesses the project effective.

### **C. Efficiency of Resource Use**

19. The PCR rated the project less than efficient. The economic internal rate of return (EIRR) was calculated at 20% at completion, compared with the 42% estimated at appraisal. The lower EIRR was mainly due to delays, higher costs, and use of actual data at completion and more realistic assumptions. Sensitivity analysis showed that the project's economic viability was robust. The project took about 9 years to complete due to procurement delays and protracted resettlement issues. The PMU also pursued voluntary land donations, even though the resettlement plan did not allow such. The extended project implementation duration raised costs for consulting services and project management costs.

20. This validation notes a few shortcomings in the methodology used in the EIRR calculation. The PCR indicated that the same shadow price coefficients applied at appraisal were used for the economic reevaluation. Since the economic analysis at appraisal was undertaken in 2009, shadow pricing coefficients could have been calculated with the latest economic information in 2021. These coefficients could have changed during the 12-year period between appraisal and completion. The PCR also indicated that world price was the numeraire. Therefore, traded goods and services should not be adjusted and nontraded goods and services should be adjusted by a standard conversion factor. However, the PCR adjusted traded goods and services by a shadow exchange rate factor and had not adjusted nontraded goods and services.

21. The PCR estimated the operation and maintenance (O&M) at 1% of the investment cost for the first 10 years, and 2% thereafter. The EIRR calculation could have used EDL's current actual costs of O&M for the transmission and distribution system, taking into consideration the age of the project facilities. The PCR indicated that generation and O&M costs were treated as non-tradable. The Lao PDR sells electricity to Thailand and other countries in the region. Any excess power generated and not consumed domestically may be sold to these countries. Therefore, domestically generated electricity has an economic opportunity cost (the export price) and is tradable. The O&M costs are also tradable since all material costs must be imported. Only the labor component is non-tradable.

22. The PCR assumed that the project only displaced kerosene and diesel, which comprised the non-incremental benefit, and then made an undisclosed adjustment to shadow price. Since the world price is numeraire and kerosene and diesel are tradable, no adjustment was required. The PCR also stated that incremental consumption was valued as the weighted average of the price of the alternative energy source and the 2019 average electricity tariff. Incremental benefits should be valued in terms of willingness-to-pay or consumers' surplus. The incremental benefit is non-tradable and, therefore, should be adjusted by the standard conversion factor.

23. The PCR rated the project less than efficient, mainly due to shortcomings in process efficiency. Given the delay in implementation and the methodological concerns, this validation assesses the project less than efficient.

## **D. Preliminary Assessment of Sustainability**

24. The PCR rated the project likely sustainable. The reevaluated project financial internal rate of return (FIRR) was 4.9%, against the real weighted average cost of capital (WACC) of 2.5%. At appraisal, the FIRR was estimated at 11.5% against a WACC of 2.7%. The reduction in the FIRR was mainly attributed to implementation delays. This validation finds that the FIRRs and WACCs in the RRP and PCR were not comparable since the FIRR was calculated on a before-tax basis and the WACC on an after-tax basis. The FIRR calculations should have included income tax as a cost.

25. The PCR indicated that a major challenge for the Lao PDR power sector was the financial sustainability of EDL. Earnings did not cover operating expenditures since electricity tariffs did not reflect the cost of supply. Take-or-pay clauses in power purchasing agreements commit EDL to purchase electricity in excess of demand. EDL's financial statements showed that O&M expenditures for the country fell to less than 1% of fixed assets over the period of 2014–2018, which was below the industry average of 3%. However, EDL had a plan to increase electricity tariffs by 5% between 2021 and 2025. The increase for 2021 became effective in March 2021 and was expected to enhance the ability of EDL to allocate sufficient funds for O&M cost.

26. This validation notes that the RRP indicated that EDL's electricity tariff reached cost recovery in 2008. EDL was expected to implement a new program of tariff adjustments based on inflation and exchange rates to meet future investment requirements and maintain its financial sustainability. Also, accounts receivables, particularly from government entities, were a serious liquidity issue for EDL. EDL's financial projections for 2009–2016 indicated overall financial performance to be within an acceptable range with a profit margin of at least 15%, debt–equity ratio of 0.5–1.0 times and debt service coverage ratio of more than 1.5 times. However, the PCR provided little discussion on why EDL's financial position deteriorated during project implementation, given that satisfactory financial performance was expected at appraisal.

27. This validation finds that the financial health of EDL is critical for project sustainability. As operating losses accumulate, there will likely be fewer resources for maintenance of project facilities and other EDL assets, as has begun to happen. This will ultimately lead to higher system losses and poorer service quality. Given the inadequate increases in the electricity tariff over the near term, there is also a high probability that EDL will become insolvent. Therefore, this validation assesses the project less than likely sustainable.<sup>6</sup>

## **III. OTHER PERFORMANCE ASSESSMENTS**

### **A. Preliminary Assessment of Development Impact**

28. The PCR rated the project's development impact satisfactory. As of 2019, 93% of villages (target was 80%) and 94% of households (target was 90%) in the Lao PDR were electrified. The provincial targets also exceeded with 68% of households in Phongsali province were electrified (target was 28%) and 98% were electrified in Xaignabouli province (target was 98%). The combined achievement was 93% for both provinces against the target of 79%. The PCR indicated that the project provided opportunities for starting small businesses and diversifying

<sup>6</sup> ADB Lao Resident Mission and the Southeast Asia Energy Division disagree with this rating and view that the poor financial health of EDL will not affect the project's sustainability considering EDL's established mechanism for fund allocation for O&M. The EDL policy of allocating sufficient provision in its annual O&M budget continuously ensures that the country's electricity system functions properly. In case of shortages, EDL defers new investments, for instance, building substations and network expansions, to ascertain the stability of power supply across the country.

income-earning activities. Other benefits were better connectivity to the grid and access to information through mobile phones rising to 86% from 67%. Indoor air pollution in homes was reduced by replacing diesel-fueled wick lamps with electric lighting and use of electric rice cookers.

29. The project contributed to ADB's strategic agenda of promoting inclusive economic growth, regional cooperation and integration, and promoting partnerships. It provided access to electricity for 24,095 households, including 8,832 poor households. Power interconnections financed by the project expanded regional power trade with Thailand. Coordination with KEXIM strengthened cofinancing partnerships that mobilized about \$33 million for the project. This validation assesses the development impact of the project satisfactory.

## **B. Performance of the Borrower and Executing Agency**

30. The PCR rated the performance of the borrower and executing agency satisfactory. The borrower provided adequate support for the project during preparation and implementation and took the necessary actions to make the grant effective. EDL maintained ownership of the project during the implementation period. The borrower and EDL assured compliance with most of the grant covenants and submitted audited financial reports of acceptable quality. EDL engaged satisfactorily with project-affected people and provided counterpart funding without delay. It adapted to the changing circumstances of the project by providing increasing counterpart funding for the 22 kV lines and for unexploded ordnance clearance. However, EDL's weak compliance on social safeguard requirements delayed benefits, despite resolving these safeguard issues later.

31. This validation finds that the lack of compliance with the grant's financial covenants and EDL's deteriorating financial performance during project implementation were major failings of the borrower. The borrower and EDL also pursued a policy of land expropriation (voluntary land donations), which was not allowed in the grant agreement. Therefore, this validation assesses the performance of the borrower and executing agency less than satisfactory.

## **C. Performance of the Asian Development Bank and Cofinanciers**

32. The PCR rated ADB's performance less than satisfactory and KEXIM's performance satisfactory. ADB satisfactorily designed the project that targeted poor households' access to power and better management of the power sector in the Lao PDR. Grant and project agreements included reasonable and achievable covenants, except for some financial covenants. ADB adapted to the changing needs of the project by reallocating resources to support additional consulting services and to finance additional 22 kV lines. Continuous support during the nearly 9-year project implementation period ensured the achievement of the project outcome.

33. However, ADB made some avoidable mistakes including not engaging financial management specialists in review missions, even when EDL's financial health was deteriorating. ADB did not engage with EDL on financial sustainability issues until 2018. Initial assessments underestimated the resettlement impacts, resulting in social safeguard issues being overlooked. Gaps between some review missions were too long and a few included social safeguard specialists. Also, the resettlement plan that was updated after a detailed measurement survey was not subjected to proper scrutiny. Consequently, the project was noncompliant with social safeguard requirements for 26 months. PMU staff, contractors, and staff of institutes involved in formulating and implementing the grievance redress mechanism should have been trained on ADB and government's social safeguards requirements. ADB's follow-up to ensure regular

submission of timely monitoring reports would have helped in the early identification and resolution of issues. Frequent changes of ADB project officers exacerbated these problems.

34. KEXIM contributed \$500,000 to the consultancy budget for various purposes, including support for procurement of one turnkey package. However, not all these funds were used, and its reallocation were constrained by KEXIM's procurement guidelines and its tied nature. KEXIM agreed to finance the transmission line that was dropped from the ADB-financed module 1 when the project experienced cost overruns. ADB and KEXIM could have made more effort to harmonize their procurement procedures and strengthen joint project monitoring during implementation. This validation assesses ADB performance less than satisfactory and KEXIM's performance satisfactory.

#### IV. OVERALL ASSESSMENT, LESSONS, AND RECOMMENDATIONS

##### A. Overall Assessment and Ratings

35. The PCR rated the project successful based on its ratings of relevant, effective, less than efficient, and likely sustainable. This validation assesses the project less than successful. It rated the project less than likely sustainable mainly due to the financial health of EDL.

##### Overall Ratings

| Validation Criteria              | PCR                    | IED Review                   | Reason for Disagreement and/or Comments  |
|----------------------------------|------------------------|------------------------------|--|
| Relevance                        | Relevant               | Relevant                     |  |
| Effectiveness                    | Effective              | Effective                    |  |
| Efficiency                       | Less than efficient    | Less than efficient          |  |
| Sustainability                   | Likely sustainable     | Less than likely sustainable | EDL's poor financial health will likely affect sustainability.                       |
| <b>Overall Assessment</b>        | <b>Successful</b>      | <b>Less than successful</b>  |  |
| Preliminary Assessment of Impact | Satisfactory           | Satisfactory                 |  |
| Borrower and executing agency    | Satisfactory           | Less than satisfactory       | Low compliance on financial covenants and deteriorating financial performance of EDL |
| Performance of ADB               | Less than satisfactory | Less than satisfactory       |  |
| Quality of PCR                   |                        | Less than satisfactory       | Para. 41.  |

ADB = Asian Development Bank, EDL = Électricité du Laos, IED = Independent Evaluation Department, PCR = project completion report.

Source: ADB (IED).

##### B. Lessons

36. The PCR identified five lessons. First, early identification and preparation of engineering designs and safeguards documents can accelerate the procurement process. Second, project implementation delays could be reduced if a consultancy firm with in-country experience is selected. Third, cost overruns could be partly mitigated if international market conditions and cost trends are factored into the estimation of project costs. Fourth, multiple financing sources could be avoided if cofinanced procurement leads to delays. The fifth lesson had five sublessons. First,

giving more attention to category B social safeguard projects can help avoid underestimating resettlement impacts that eventually lead to bigger problems during implementation. Second, social safeguard problems can be avoided if project preparation properly assesses the safeguard implementation capacity of executing and implementing agencies and incorporate capacity building mechanisms in the project design. Third, land acquisition issues need to be made clear to executing and implementing agencies at the early stages of a project. Fourth, social safeguard problems could be avoided with socioeconomic surveys of affected households during project appraisal and updating resettlement plans. Lastly, project design could consider whether the skill sets of the vulnerable people match the project's short-term employment requirements.

37. This validation offers two additional lessons. First, the financial health of a project operating entity is paramount to the sustainability of a project. Therefore, detailed assessments of the operating entity's financial position are needed, including remedial measures to address shortcomings and as part of a project performance monitoring system (PPMS). Second, the operating entity's financial performance could be included in discussions during review missions, issues and problems addressed along with a corrective action plan, and steps taken to suspend the project if these are not followed.

### **C. Recommendations for Follow-Up**

38. The PCR recommended that ADB should continue to monitor tariff revisions and their implementation to ensure cost recovery, towards EDL's financial sustainability.

## **V. OTHER CONSIDERATIONS AND FOLLOW-UP**

### **A. Monitoring and Reporting**

39. The RRP indicated that EDL will ensure that a comprehensive program for project performance monitoring and evaluation acceptable to ADB be carried out during implementation and subsequent operation to assess the achievement of the project's objectives. The PCR indicated that a PPMS was established and implemented from 2014 to 2019. However, it did not discuss the design, implementation, and the quality of the PPMS.

40. EDL submitted annual progress reports and quarterly reports to ADB and KEXIM. It also submitted a PCR, although about 9 months late, to incorporate reporting on the corrective action plan. The government maintained separate records and accounts for the grant and had these audited by a private external audit firm acceptable to ADB. A separate audit opinion was issued on the use of the advance account and statement-of-expenditure procedures.

### **B. Comments on Project Completion Report Quality**

41. The PCR was succinct and assessed all the evaluation criteria. However, it was less than candid and thorough in assessing EDL's financial performance, leading to validation lowering the sustainability rating and downgrading borrower and executing agency's rating. The economic and financial analyses had methodological issues. The design, implementation, and the quality of the PPMS was not discussed. This validation assesses the PCR's quality less than satisfactory.

### **C. Data Sources for Validation**

42. Data sources used in this validation include the RRP, PCR, government plan, and ADB's country program and mission reports.

**D. Recommendation for Independent Evaluation Department Follow-Up**

43. The PCR recommended that a project performance evaluation report be prepared any time after the submission of the PCR to the Board. This validation supports this recommendation.