



Energy Transition Pathways for the 2030 Agenda

SDG 7 Roadmap for the Lao People's Democratic Republic

Energy Transition Pathways for the 2030 Agenda

SDG 7 Roadmap for the Lao People's Democratic Republic

**Developed using National Expert SDG7
Tool for Energy Planning (NEXSTEP)**

Energy Transition Pathways for the 2030 Agenda

SDG 7 Roadmap for the Lao People's Democratic Republic

United Nations publication

Copyright © United Nations 2022

All rights reserved

ST/ESCAP/3039

Photo Credits:

Chapter 1: balein/shutterstock; Chapter 2: Sergey Nivens/shutterstock; Chapter 3: Nikada/iStock;
Chapter 4: phive2015/iStock; Chapter 5: Chicetin/iStock; Chapter 6: zhengzaishuru/shutterstock;
Chapter 7: annapictures/pixabay; Chapter 8: tomasz jagla/pixabay; Chapter 9: Tomas Luka/shutterstock.

This publication may be reproduced in whole or in part for educational or non-profit purposes without special permission from the copyright holder, provided that the source is acknowledged. The ESCAP Publications Office would appreciate receiving a copy of any publication that uses this publication as a source.

Use may not be made of this publication for resale or any other commercial purpose whatsoever without prior permission. Applications for such permission, with a statement of the purpose and extent of reproduction, should be addressed to the Secretary of the Publications Board, United Nations, New York.

Table of Contents

Acknowledgements	v
Foreword: ESCAP	vi
Foreword: Lao People's Democratic Republic	vii
Abbreviations and acronyms	viii
Executive Summary	ix
A. Highlights of the roadmap.....	ix
B. Achieving the Lao PDR's SDG 7 and NDC targets by 2030.....	x
C. Important policy directions	xi
1. Introduction	1
1.1 Background	1
1.2 SDG 7 targets and indicators	2
1.3. Nationally Determined Contribution (NDC)	2
2.NEXSTEP methodology	3
2.1 Key methodological steps	4
2.2 Scenario definitions	5
2.3 Economic analysis	5
2.3.1 Basics of economic analysis.....	5
2.3.2 Cost parameters	6
2.3.3 Scenario analysis	6
3.Overview of the Lao PDR's energy sector	7
3.1. Current situation.....	8
3.2. Data availability	9
3.3. National energy profile.....	10
3.4. National energy policies and targets and development plans	10

3.5. National energy resource assessment	11
3.6. National energy balance, 2019	12
3.7. Power generation	14
3.8. Energy Modelling Projections	15
3.9. Energy demand outlook – BAU scenario	16
3.9.1. Energy demand outlook	16
3.9.2. Renewable Energy	16
3.9.3. Energy efficiency	16
3.9.4. Power generation	16
3.9.5. GHG emissions	17
3.10. Energy demand outlook – current policy scenario	18
3.11. Electricity generation outlook	19
3.12. Energy supply outlook	20
3.13. Energy sector emissions outlook	21

4.SDG scenario – achieving SDG 7 by 2030 **23**

4.1. SDG energy demand outlook	25
4.2. SDG 7 targets	26
4.2.1. SDG 7.1.1 – access to electricity	26
4.2.2. SDG 7.1.2 – access to clean fuel and technologies for cooking	26
4.2.3. SDG 7.2 – renewable energy	28
4.2.4. SDG 7.3 – energy efficiency	28
4.2.5. GHG emissions	30
4.3. Power generation in the context of SDG 7	31
4.4. Investment cost in the power sector	32

5.Energy transition pathway with increased ambitions **33**

5.1. High-energy efficiency scenario	35
5.2. Coal phase-out scenario	36
5.2.1. Coal-fired power plant expansion plan in the Lao PDR	36
5.2.2. Global drivers for shifting away from coal	37
5.2.3. Coal-fired power plants pose future economic risks	37
5.2.4. Power sector strategy in the coal phase-out scenario	38
5.2.5. Resources potential check	38
5.2.6. Managing the transition of the coal industry with ‘just’ transition	39

6. Scenario ranking **41**

7. Policy recommendations **43**

7.1. Urgent focus on increasing access to clean cooking fuels and technologies	43
7.2. Economy-wide intensive energy efficiency improvement is needed	43
7.3. Transport electrification strategies provide multi-fold benefits	44
7.4. The Lao PDR should focus on phasing out coal from the power sector	44

8. Building back better in the recovery from COVID-19 with the SDG 7 roadmap 45

- 8.1. Accelerating access to clean and modern energy services..... 46
- 8.2. Savings from the energy sector will help to build other sectors 46
- 8.3. Restructuring fiscal measures to invest where it is needed the most..... 46

9. Conclusion 47

References 49

List of figures

Figure ES 1.	Lao PDR access to clean cooking under the CPS and SDG scenarios.....	x
Figure ES 2.	Lao PDR energy efficiency improvement rate	xi
Figure 1.	Different components of the NEXSTEP methodology	4
Figure 2.	Total final energy consumption by sector, 2019	13
Figure 3.	Total final energy consumption by fuel type, 2019	13
Figure 4.	Total primary energy supply by fuel type, 2019	14
Figure 5.	Final energy demand, 2022-2030, by sector, BAU scenario	16
Figure 6.	Electricity demand by sector, 2022-2030, BAU scenario	17
Figure 7.	GHG emissions by type, 2021-2030, BAU scenario.....	17
Figure 8.	Energy demand outlook, 2021-2030	18
Figure 9.	Power capacity installed, CPS scenario.....	20
Figure 10.	Electricity output by technology type, CPS scenario.....	20
Figure 11.	Emissions from the demand side under the current policy scenario.....	21
Figure 12.	Emissions from the power sector under the current policy scenario	22
Figure 13.	Projection of TFEC, by sector, in different scenarios	25

预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_31619

