



USAID CLEAN POWER ASIA

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# Lao PDR Vulnerability Assessment and Resilience Strategy

## Building Resilience of the Power System in the Low-Carbon Transition

Maythiwan Kiatgrajai

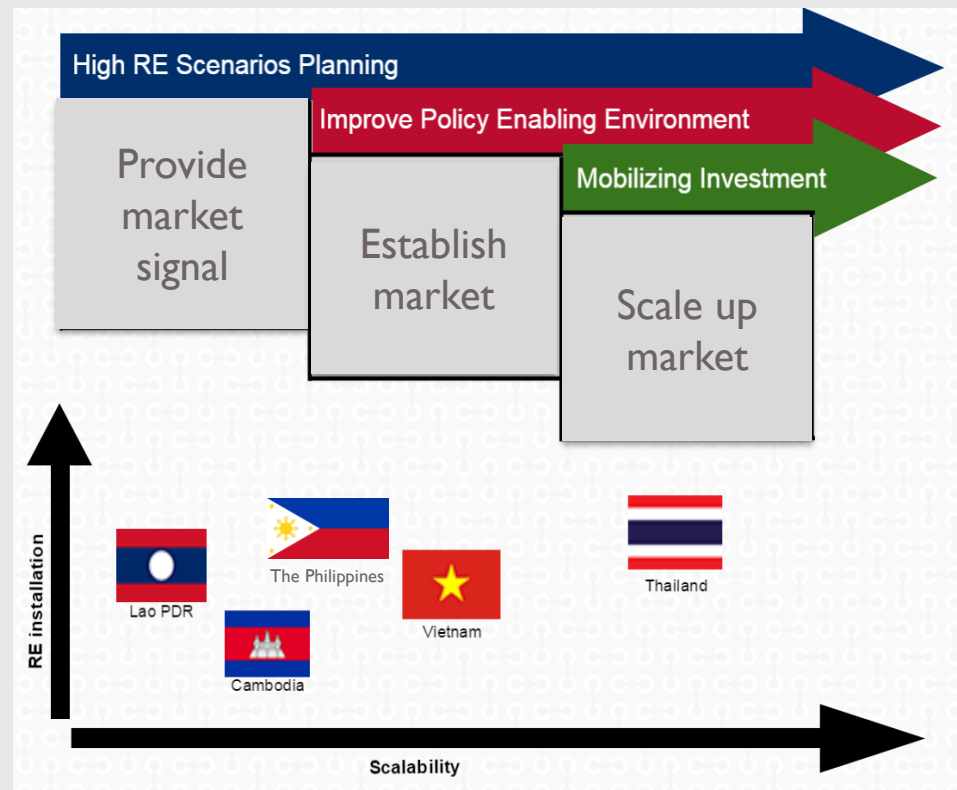
Senior RE Planning and Policy Specialist, USAID Clean Power Asia

April 28, 2021

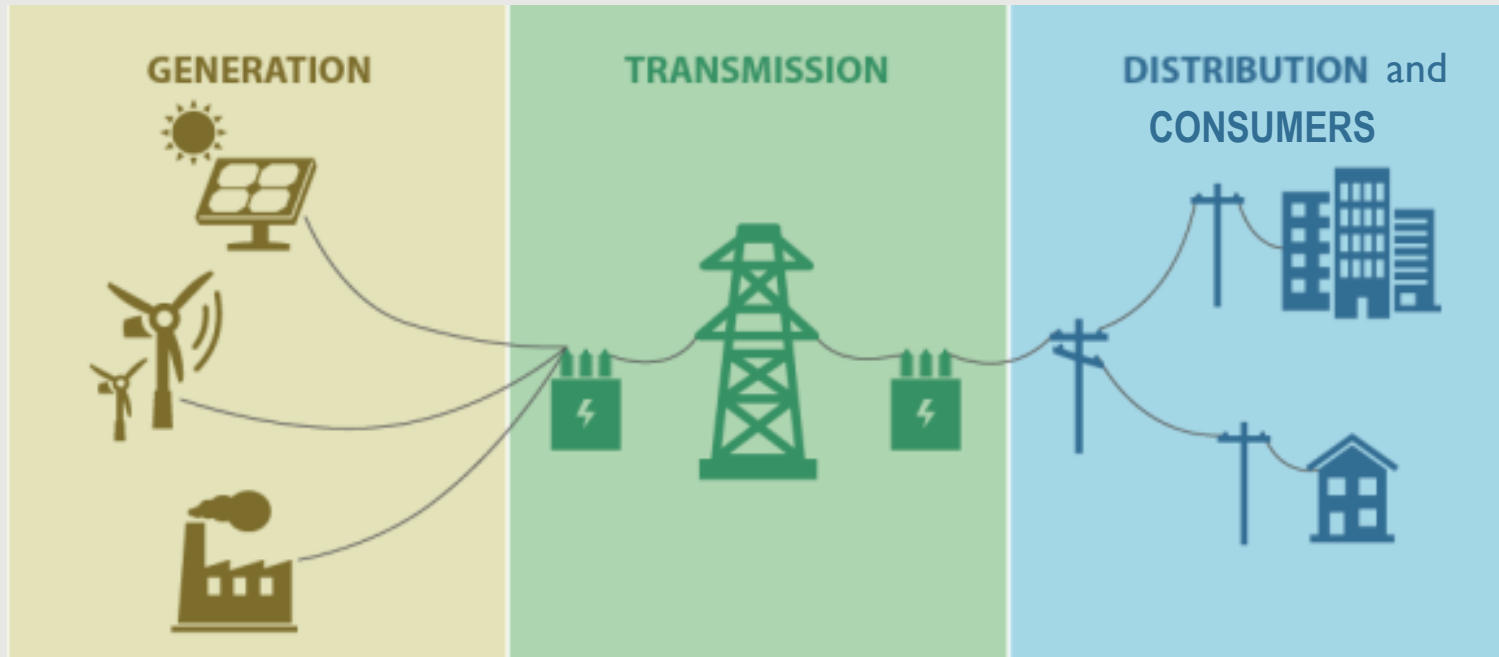
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# USAID Clean Power Asia increases deployment of grid-connected renewable energy in Asia

- ❑ 5 years: June 2016 – June 2021
- ❑ Regional clean energy program
- ❑ Focus on Cambodia, Lao PDR, Thailand, Vietnam, and Philippines
- ❑ Goals:
  - ❑ 15 laws/policies/regulations
  - ❑ \$750 M USD investment mobilization
  - ❑ 500 MW of installed RE
  - ❑ 3.5 M tCO<sub>2</sub>e reduction
- ❑ Implemented by Abt Associates and partners
- ❑ Funded by U.S. Agency for International Development (USAID)



# 4 main components of power system



[https://www.everycrsreport.com/files/20190610\\_R45764\\_7bce1fe797f5a490768d6ac2843ea0e53c922253.html](https://www.everycrsreport.com/files/20190610_R45764_7bce1fe797f5a490768d6ac2843ea0e53c922253.html)

# VA & power sector resilience planning process



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Aug 2018 – May 2019



## Identify Threats

Identify the potential threats to the power sector and assign a likelihood score for each.



## Define Impacts

Describe the effects that threats have on the power sector.



## Assess Vulnerabilities

Determine power sector vulnerabilities and assign a severity score for each.



## Calculate Risks

Evaluate risk, which is the product of the threat likelihood and vulnerability severity score.



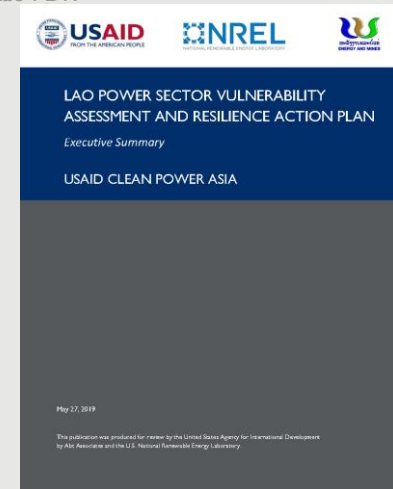
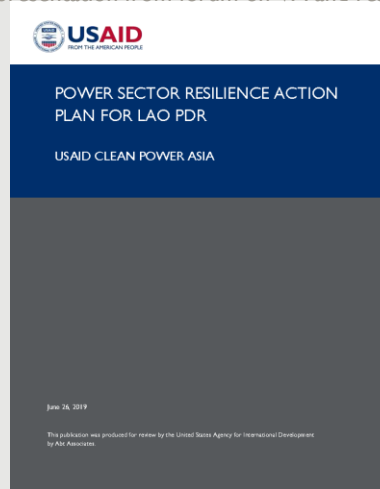
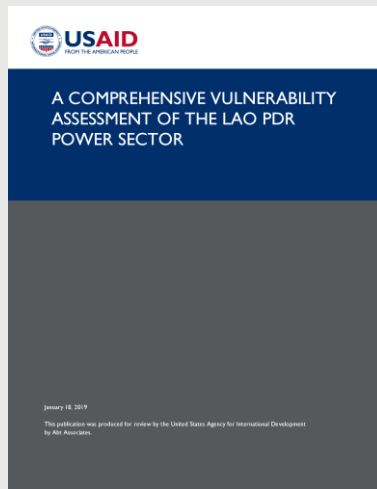
## Develop Solutions

Develop and prioritize resilience action plans based on impact, ability to implement, and cost.

## 1. Vulnerability Assessment

## 2. Resilience Action Plan

Source: NREL presentation from forum on VA and resilience action in Lao PDR





# Stakeholder engagement

- **2 power sector stakeholder workshops:** MEM, MoNRE, EDL, MPI, MOAF, EDL-Gen, LWU, BOL
- **3 VA Advisory group meetings:** High level staff from MEM, EDL, EDL-Gen



VA Advisory Group  
[August & November 2018, April 2019]

VA Stakeholder Workshop  
[August 2018]



Power Sector Resilience  
Stakeholder Workshop  
[November 2018]



# VA & resilience team

Experts from **NREL** & **Abt**

## Lao VA Advisory group



**Sherry Stout**  
**NREL**



**Nathan Lee**  
**NREL**



**Jason Vogel**  
**Abt Associates**  
(former)  
**Climate Impact**  
**Group, UW (present)**



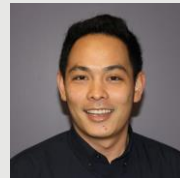
**Lorine Giangola**  
**Abt Associates**

Name		Organization	Position
<b>Sanhya</b>	<b>Somvichit</b>	Department of Energy Policy and Planning, MEM	Deputy Director General
<b>Litthanoulouk</b>	<b>Laspho</b>	Power Generation Division, Department of Energy Policy and Planning, MEM	Chief of Division
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<b>Soukvilai</b>	<b>Phimmasene</b>	System Planning Division, Department of Energy Policy and Planning, MEM	Technical Officer
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## USAID Clean Power Asia team



**Dana Kenney**  
Chief of Party



**Pitoon Junthip**  
RE Planning Expert

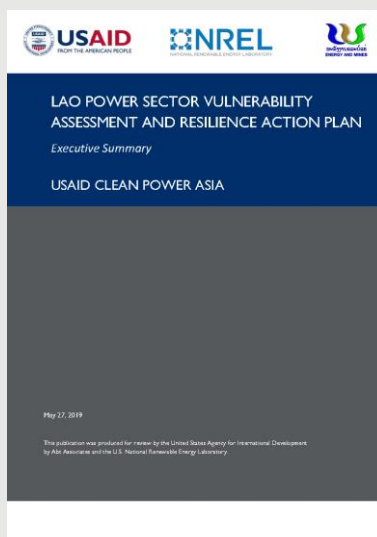
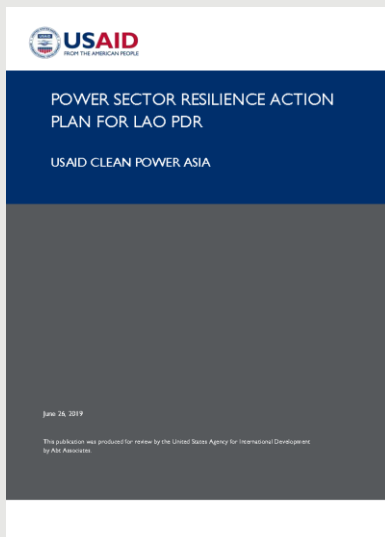
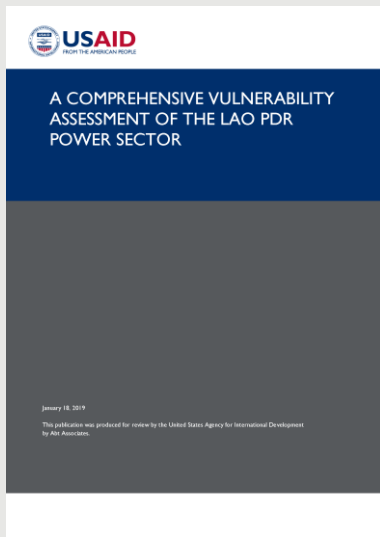


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Lao PDR  
Country Coordinator

## Resources



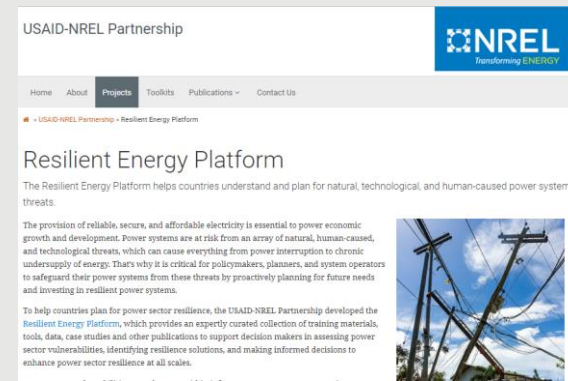
<http://usaidcleanpowerasia.aseanenergy.org/resource/a-comprehensive-vulnerability-assessment-of-the-lao-pdr-power-sector/>

<http://usaidcleanpowerasia.aseanenergy.org/resource/power-sector-resilience-action-plan-for-lao-pdr/>

<http://usaidcleanpowerasia.aseanenergy.org/resource/lao-power-sector-vulnerability-assessment-and-resilience-action-plan-executive-summary/>



<http://usaidcleanpowerasia.aseanenergy.org/>



<https://www.nrel.gov/usaid-partnership/resilient-energy-platform.html>

<http://usaiddcleanpowerasia.aseanenergy.org/event/forum-on-the-vulnerability-assessment-and-resilience-action-plan-for-the-lao-pdr-power-sector/>

# In the break-out...

- How we identified and engaged stakeholders
- What are their roles?
- Limitations
- Lessons learned
- Recommendations





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