



PNNL-Thammasat Project Meeting

April 27/28, 2022

PNNL



PNNL is operated by Battelle for the U.S. Department of Energy



Agenda

- Subcontract
- Upcoming deliverables
- Population & GDP data discussion
- Additional GCAM questions
 - Energy consumption
 - EEP2018 sector names
- Stakeholder Engagement (MEA, BMA, EPPO, EGAT)
- Next steps

Project Time Period: 02 May 2022 to 30 June 2023

Objective: Explore policy and technology pathways to carbon neutrality (2050) and net-zero emission (2065) in Bangkok through technical analysis and engagement with local stakeholders and experts.

GCAM Training Session	Timeline
GCAM training	Jun 2022
GCAM training	Sep 2022
GCAM training	Dec 2022

Workshops	Timeline
Workshop 1 with local institutions	Sep 2022
Workshop 2 with local institutions	Jan 2023
Workshop 3: ASEAN Best Practices workshop	Jun 2023

Deliverables	Timeline	Milestones
Memo 1: 1 Page memo with list of official Thammasat team members and roles	May 2022	Milestone 1
Workshop 1 Plan: 1 Page Agenda and Participant list for Workshop 1	Jul 2022	
Memo 2: 2-3 Page Memo with Feedback on Input Data, Scenario 1 and Scenario 2	Aug 2022	Milestone 2
Workshop 2 Plan: 1 Page Agenda and Participant list for Workshop 2	Nov 2022	
Memo 3: 2-3 Page Memo with Feedback on Scenarios 3, 4, 5	Feb 2023	Milestone 3
Workshop 3 Plan: 1 Page Agenda and Participant list for Workshop 3	Apr 2023	Milestone 4

Upcoming Deliverables

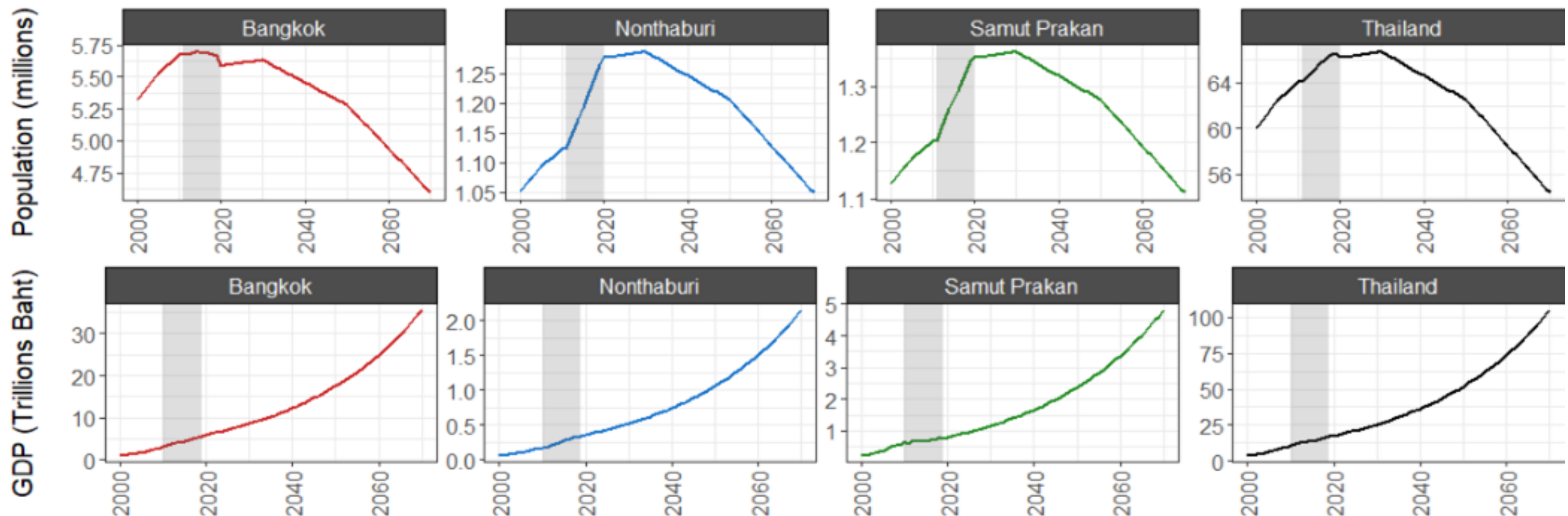
- Memo 1 (Official list of team and roles)
 - Person of Contact?
- Workshop 1
 - Content (introductory)
 - Possible dates & times
 - Who to invite

[Planning sheet](#)

Population & GDP data

Raw Data: https://github.com/JGCRI/seasia/tree/main/data/Thailand/socioeconomic_inputs

Variable	Assumptions	Data Sources
Population	Pre-2010 and post-2019 population growth rates consistent between regions	<ul style="list-style-type: none"> All regions 2010-2019: NSO Pre-2010 & post-2020 growth rates: UN
GDP	Pre-2011 and post-2020 GDP growth rates consistent between regions	<ul style="list-style-type: none"> All regions 2011-2020: NSO Pre-2011 growth rates: WB 2021-2037 growth rates: PDP2018
	Post-2037 GDP growth rate constant everywhere	

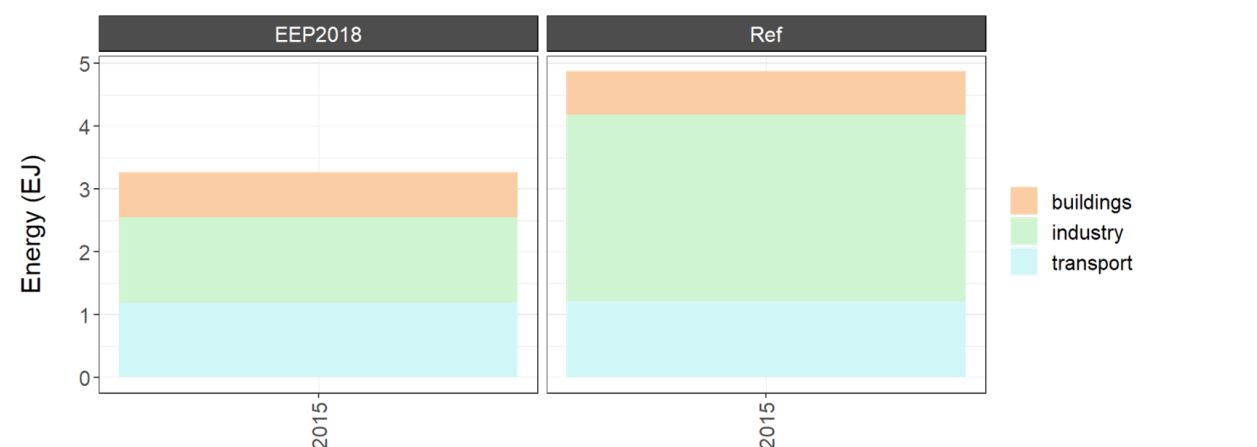


Energy consumption

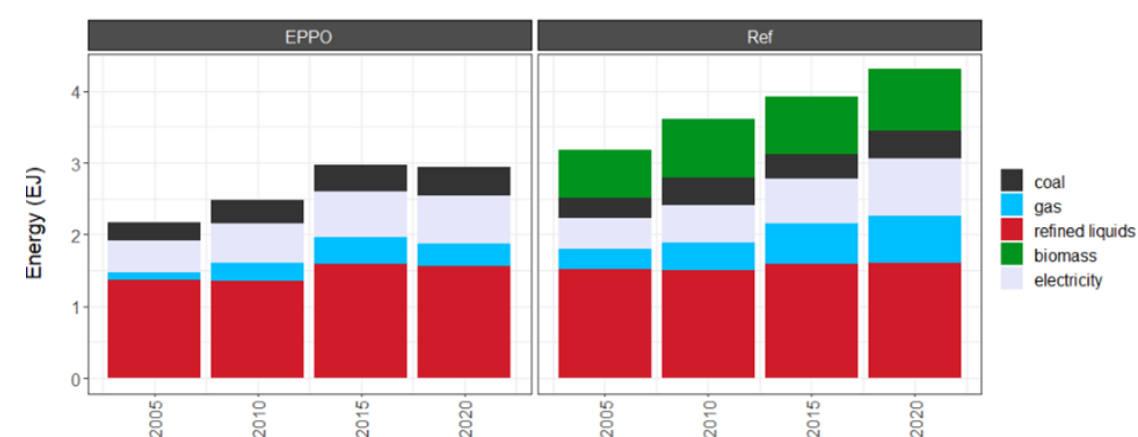
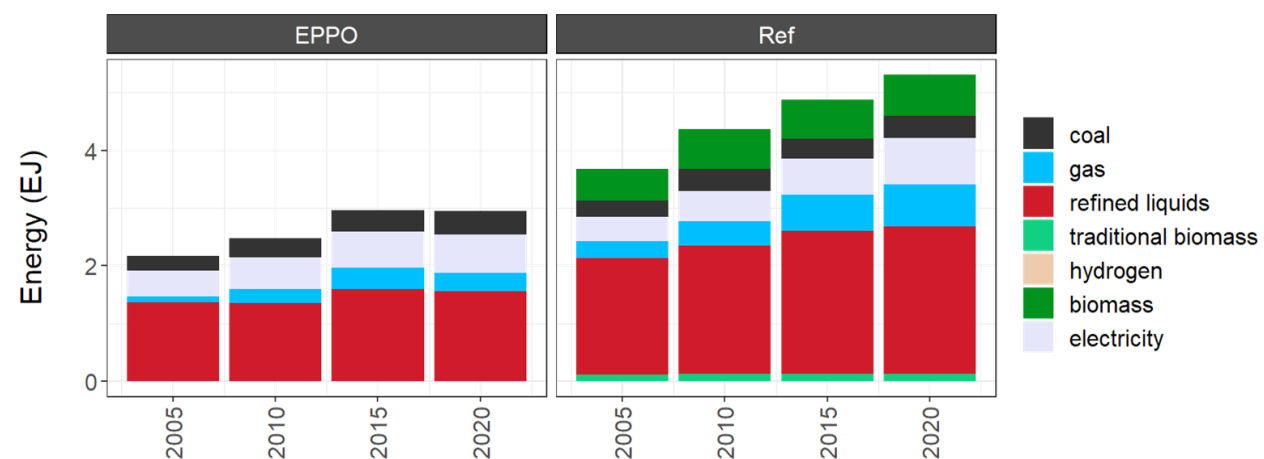
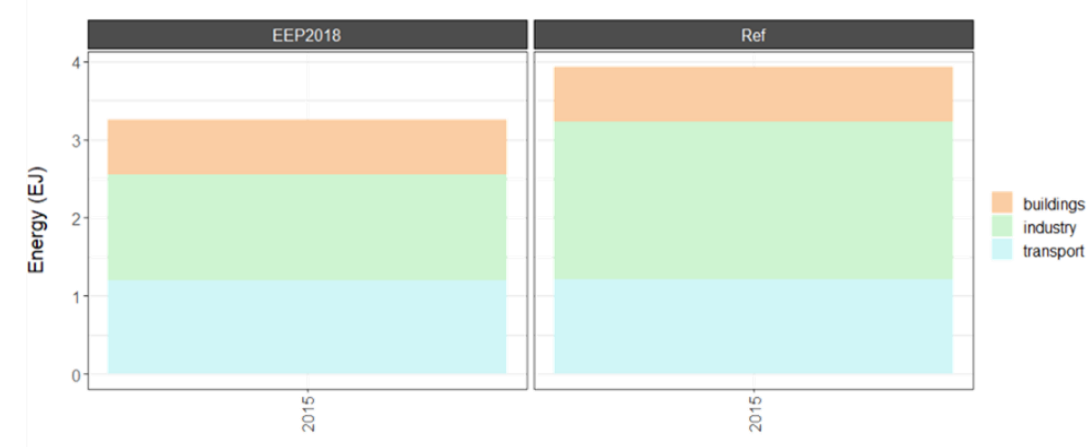
All Raw Data: https://github.com/JGCRI/seasia/tree/main/data/Thailand/scenario_outputs/initial_diagnostics

Local Data Sources: [EPPO \(by fuel\)](#) and [EEP2018 \(by sector\)](#)

With industrial feedstocks (Ref)



Without industrial feedstocks (Ref)



EEP2018 Energy Consumption Sectors

GCAM sectors

EEP2018

ตารางที่ 4.2 เป้าหมายด้านไฟฟ้า และด้านความร้อน

Industry
Buildings (commercial)?

Buildings (residential)

Industry (agriculture)

Transport

สาขาเศรษฐกิจ	ด้านไฟฟ้า	ด้านความร้อน	รวม (ktoe)
เป้าหมายภายใต้กรอบแผนอนุรักษ์พลังงานในช่วงปี พ.ศ. 2561 – 2580	15,379	33,685	49,064
(1) อุตสาหกรรม	6,777	14,360	21,137
(2) ธุรกิจการค้า	5,532	886	6,418
(3) บ้านอยู่อาศัย	2,923	377	3,300
(4) เกษตรกรรม	147	380	527
(5) ขนส่ง	-	17,682	17,682

Stakeholder Engagement

- MEA
 - Invite Khun Nattanont to next PNNL-Thammasat meeting to give update?
- Follow up with:
 - BMA:
 - ✓ Aine responded to Khun Akkarapol and BMA by email about their request for further info (**28 Mar 2022**)
 - EPPO:
 - ✓ Khun Por sent email on **3 Mar 2022** saying that EPPO wanted to talk to Prof. Bundit.
 - EGAT:
 - ✓ Email received from EGAT (Siripan) on **24 Mar 2022** acknowledging receipt and that they will respond about collaboration

Next Steps

- PNNL
 - Integrate feedback
 - Continue developing Scenario 1
- Thammasat
 - Memo 1 (Official list of team and roles)
 - Workshop 1

[Planning sheet](#)



Thank you

