



PNNL-UTM December 2022

December 8/9, 2022

SE Asia Digitalization Project



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



Agenda

- Milestones/Contract
- Upcoming Travel
- Workshop
- Malaysia Election
- Modeling Results
- Next Steps

Milestones / Contract

- Payments not going through to UTM, has this been resolved?

GCAM Training Session	Timeline
GCAM training 1 (training 0 - Aug 18)	Nov 2022
GCAM training 2	Feb 2023
GCAM training 3	TBD

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

Deliverables	Timeline	Status	Milestones
Memo 1: 1 Page memo with list of official UTM team members and roles	Sep 2022	Complete	Milestone 1
Workshop Plan 1: 1 Page Agenda and Participant list (First and Last Name and affiliation) for Workshop 1*	Oct 2022	UTM Complete PNNL Review	Milestone 2
Memo 2: 1-2 Page Memo with Feedback on Input Data	Nov 2022	UTM Complete PNNL Review	
Memo 3: 2-3 Page Memo with Feedback on Scenario 1 and Scenario 2	Jan 2023		Milestone 3
Workshop Plan 2: 1 Page Agenda and Participant list (First and Last Name and affiliation) for Workshop 2*	Mar 2023		
Workshop Plan 3: 1 Page Agenda and Participant list (First and Last Name and affiliation) for Workshop 3*	Apr 2023		Milestone 4
Memo 4: 2-3 Page Memo with Feedback on Scenario 3	Jun 2023		

Upcoming Travel



- Monday January 9th through Friday January 13th
- Has UTM reached out to the stakeholders (DBKL, KASA, KeTSA, SEDA)?
 - PNNL can send the official invites for meetings, UTM can follow up?
 - ✓ What information needs to be included in the meeting request letters?
 - Need the contact information for stakeholders.
 - Does UTM know the appropriate contact at USAID?
- We would like to schedule some additional meetings between PNNL and UTM in the coming weeks to prepare for stakeholder meetings.
- Trip Agenda: https://docs.google.com/document/d/132_Va6AKcl-E5TQMxk-SocPguJApMJfCQ0MBtZBFudc/edit

Trip Agenda

Date	Location	Item	Personnel
Sat Jan 7	USA to Malaysia	Travel	PNNL
Sun Jan 8	USA to Malaysia	Travel	PNNL
Mon Jan 9	Kuala Lumpur	Off day	PNNL
Tue Jan 10	Kuala Lumpur	Workshop Prep, Modeling Discussion, Meet with Post	PNNL, UTM, Post
Wed Jan 11	Kuala Lumpur	Various Meetings	PNNL, USAID, DBKL, SEDA, KASA, KeTSA
Thu Jan 12	Kuala Lumpur, IsDB	Workshop	PNNL, State, UTM, DBKL, SEDA, KASA, KeTSA
Fri Jan 13		Various Meetings	
Sat Jan 14	Malaysia to Thailand	Travel	PNNL

Trip Agenda: https://docs.google.com/document/d/132_Va6AKcl-E5TQMxk-SocPguJApMJfCQ0MBtZBFudc/edit

Workshop

- Updated agenda with presentations from DBKL, NRECC, and SEDA.
- Discuss framing, what can PNNL contribute to KL's current efforts?
 - A flexible platform to investigate different policy and investment options with GCAM.
 - Linking action in KL to action across Malaysia to show the value of local action.
- Workshop Agenda: <https://docs.google.com/document/d/1-YrD5oDyTh1m2IKoo6kH2W6IItBt1A8oTG0k1IgqgiA/edit>

Workshop Agenda

Workshop 1 Tentative Agenda and Participant List
Date: Thursday, 12 January 2023
Venue: DBKL Training Institute (IDB)

Morning Session: 9am to 12pm

Time	Event	Personnel
8:30 - 9:00	Participants registration	DBKL
9:00 - 9:10	Official opening from KL City Hall	Mayor of Kuala Lumpur (DBKL)
9:10 - 9:20	Opening from US Department of State	Aine Shiozaki (State)
9:20 - 9:35	Welcome / project framing	Meredydd Evans (PNNL)
9:35 - 10:00	History of KL efforts and support from UTM, How this project contributes	Chin Siong Ho (UTM)
10:00 - 10:20	Stakeholder presentation: DBKL	DBKL
10:20 - 10:40	Stakeholder presentation: NRECC	NRECC*
10:40 - 11:00	Stakeholder presentation: SEDA	SEDA
11:00 - 11:20	GCAM introduction	PNNL
11:20 - 12:00	Q&A and discussion	All

** NRECC – Ministry of Natural Resources, Environment and Climate Change – new ministry that looks to potentially combine the previous Ministry of Environment and Water (KASA) and Ministry of Energy and Natural Resources (KeTSA); pending final official details*

Afternoon Session: 3pm to 5pm

Time	Event	Personnel
2:00 – 2:45	GCAM scenario discussion and modeling approach	PNNL
2:45 – 3:30	Stakeholder Panel	DBKL, NRECC, SEDA
3:30 – 4:00	Q&A and discussion	All

Malaysia Election



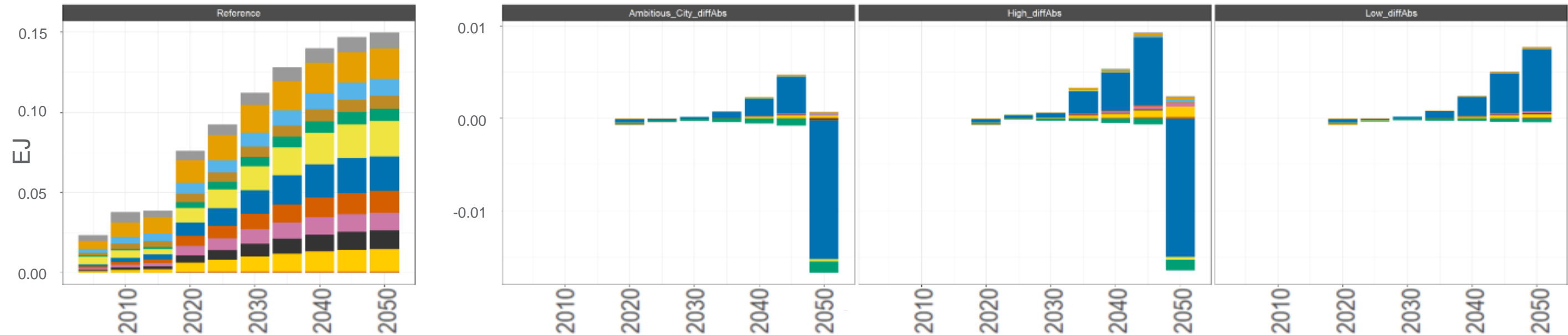
- Is the new government established?
- Will this have any impacts on the workshop or anticipated meetings?

Modeling

- Have modeled Low, High, Ambitious City scenarios
 - Results on webpage:
https://jgcri.github.io/seasia/modeling_malaysia.html#621_Summary_Figures
 - Please provide feedback on these results, note that a transportation modal shift is not yet included.
- Questions
 - Still working on modeling the modal shift from private to public transport.
 - ✓ Is the baseline split (80% private, 20% public) based on transport energy consumption or service demand?
 - Is there data available on energy consumption from different building technologies, but specifically for lighting?
 - ✓ In 2020, what % of lighting in buildings was LED vs CFL vs incandescent?
 - Is the gazetted 2040 KL Structure Plan available, or the specific plans on transportation and buildings?

Results - Buildings

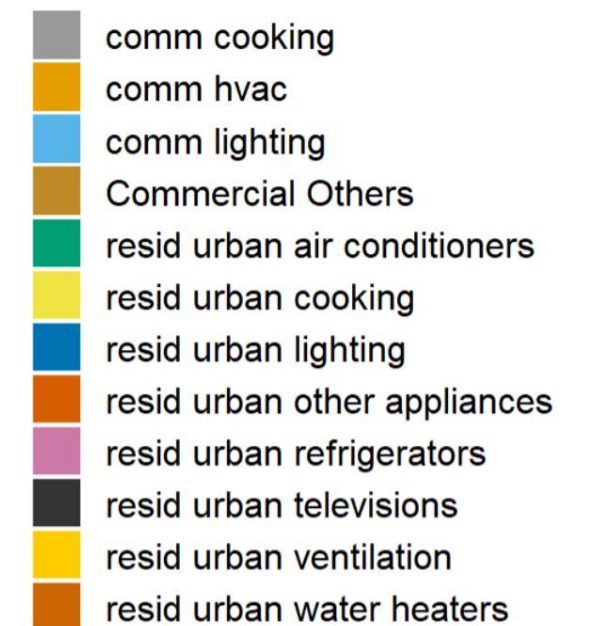
Building Final Energy by Subsector (Kuala Lumpur)



Policies modeled: High efficiency appliances, High efficiency lighting.

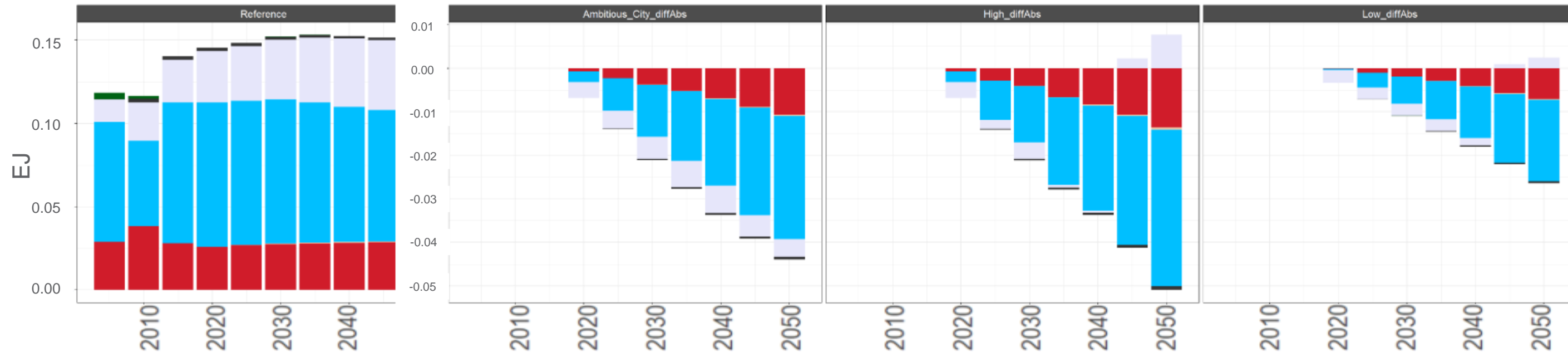
Currently an issue with our baseline lighting assumptions, resulting in increased energy consumption despite having an LED policy implemented.

Are there additional buildings policies to model? Building energy codes (would only impact new buildings), appliance standards?



Results - Industry

Industry Final Energy by Fuel (Kuala Lumpur)

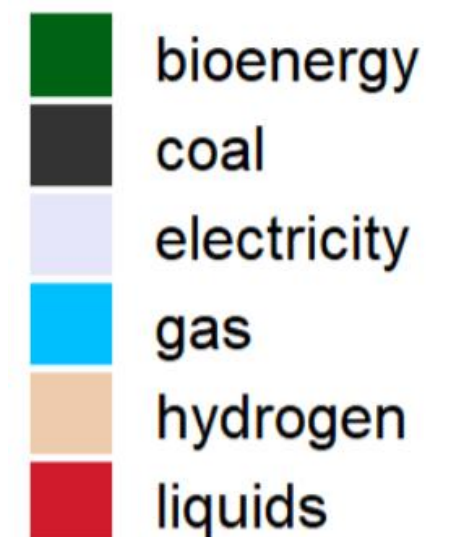


Policies modeled: Annual energy efficiency improvement.

There is overall reduced energy consumption from industry for all fuels.

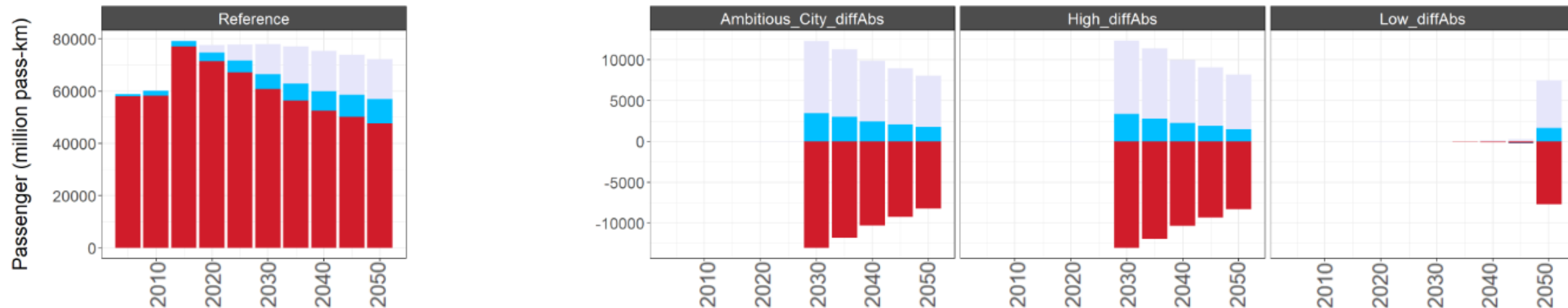
Increase in electricity consumption in 2045 and 2050 in Low and High scenarios is being investigated.

Potential to add policies for specific industries if there is data available for the industries in KL.



Results - Transportation

Passenger Transportation Demand by Fuel (Kuala Lumpur)



Policies modeled: Passenger ICE phaseout, **modal shift not yet implemented.**

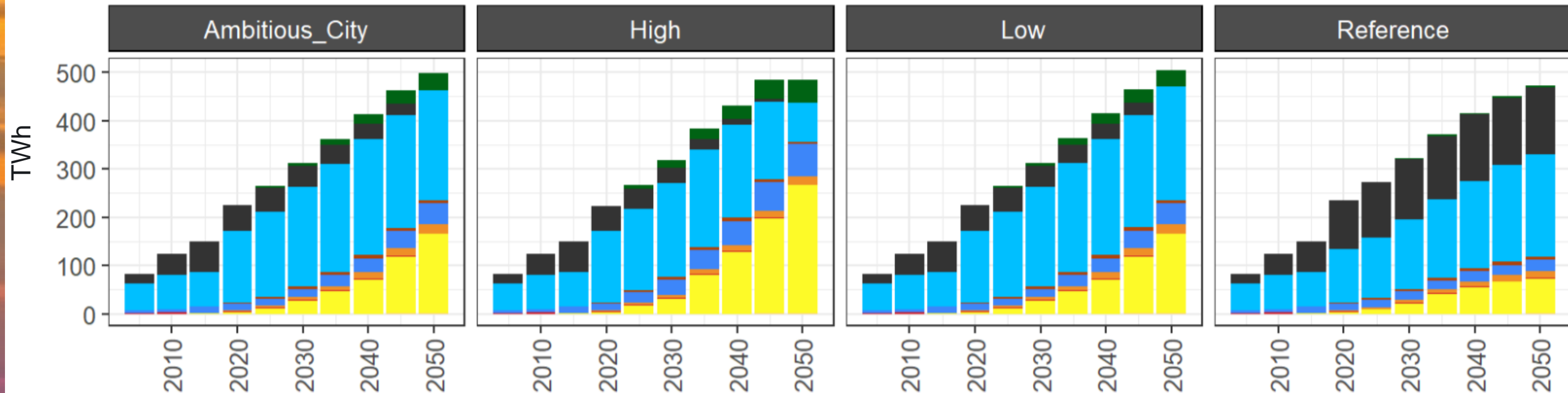
Liquid fuels are replaced by electric and gas. No new passenger ICE vehicles after 2045 in Low, or after 2025 in High.

Are there any freight policies to implement (increased rail, electrifying fleets)?

In KL, is the reduction in ICE vehicles due to lower cost EVs, prohibiting the purchase of ICEs, something else? Can switch the ICE phaseout to an EV incentive instead.

Results – Electricity Generation

Electricity Generation by Fuel (Malaysia)



Policies modeled: Coal phaseout, increased renewable energy (solar, biomass, and hydro).

Coal is phased out by 2050 in all scenarios, more aggressively in High.

Increased energy generation from solar, biomass, and hydro, to reflect values found in the KL 2030 Low Carbon Society Blueprint and feedback from UTM.

Next Steps



- UTM to send deliverables to PNNL (Memo 3)
- UTM/PNNL to coordinate meeting invitations for stakeholders
 - Need addresses for the meetings in order to submit travel request
- PNNL to schedule additional meetings
 - Friday December 16th
 - Friday December 23rd
 - Friday January 6th



Thank you

