



**Asia-Pacific
Economic Cooperation**

2018/EWG56/036

Agenda Item: 11ci

Progress Towards Energy Intensity Reduction Goal

Purpose: Information


Submitted by: APERC



56th Energy Working Group Meeting

Lima, Peru

6-7 November 2018



The 56th Meeting of APEC Energy Working Group (EWG)
Lima, Peru, 5-7 November 2018

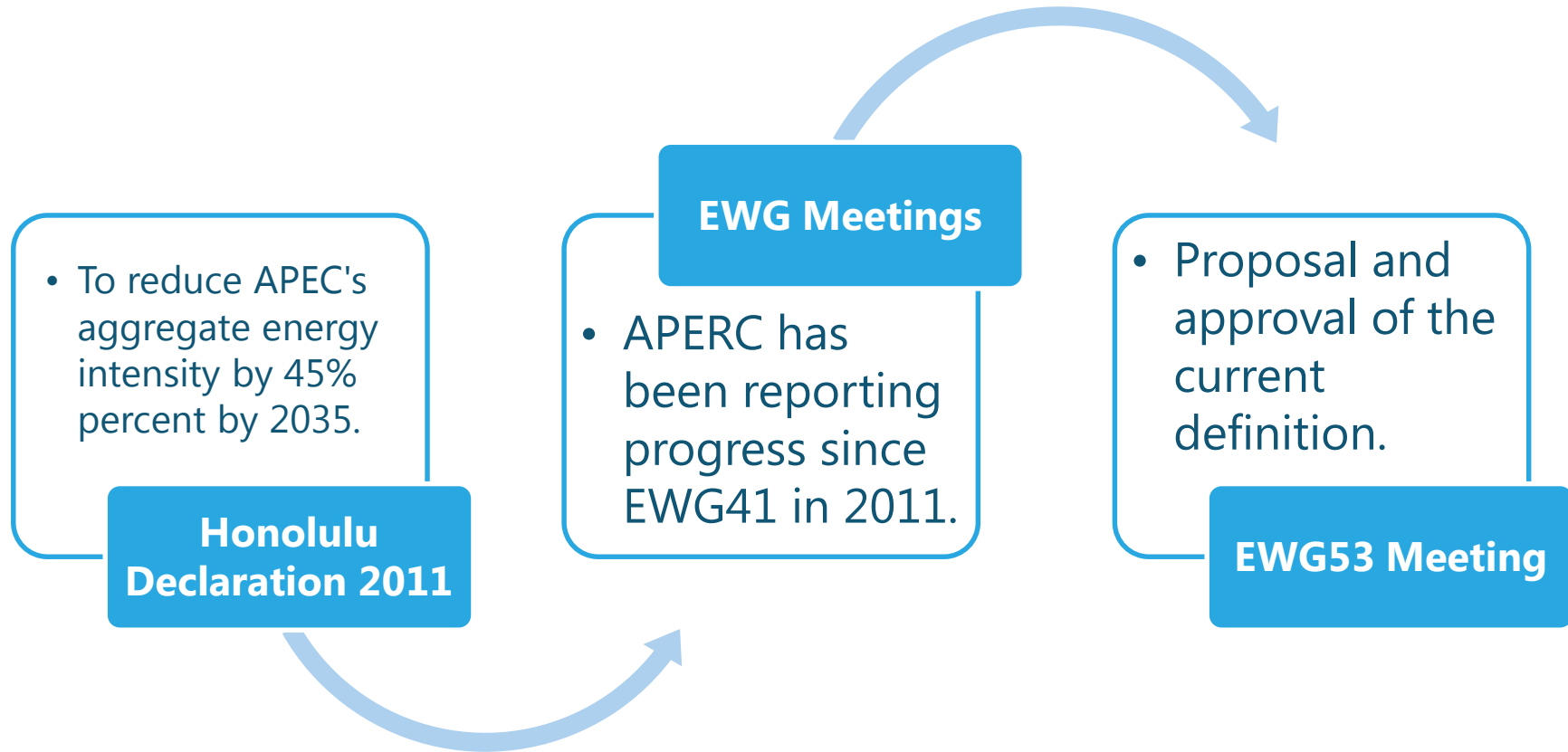
11.c.i. Progress toward Energy Intensity Reduction Goal

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APEC energy intensity indicator milestones



Agreement was reached at EWG53 to analyse final energy consumption intensity (excluding non-energy), using APEC data.

Notes on updated data sources

- ❑ All energy data collected by ESTO are as of October 2018.
 - Data improvements were made to historical data for some economies [(INA-1990-2015), (AUS, CAN, CHL, ROK, MEX, NZ, USA using IEA data from 2005 to 2015)]; Russia and Singapore were also revised from 2005 to 2015. As a result, there were slight changes on annual growth rates
- ❑ GDP data from the World Bank (PPP, constant 2011 US dollars)
- ❑ Exceptions:
 - APERC/ESTO estimates Papua New Guinea energy consumption.
 - APERC estimates Chinese Taipei GDP data.



The Results



Energy intensity continued to decline in 2016

APEC final energy consumption intensity (excluding non-energy), 2006-2016

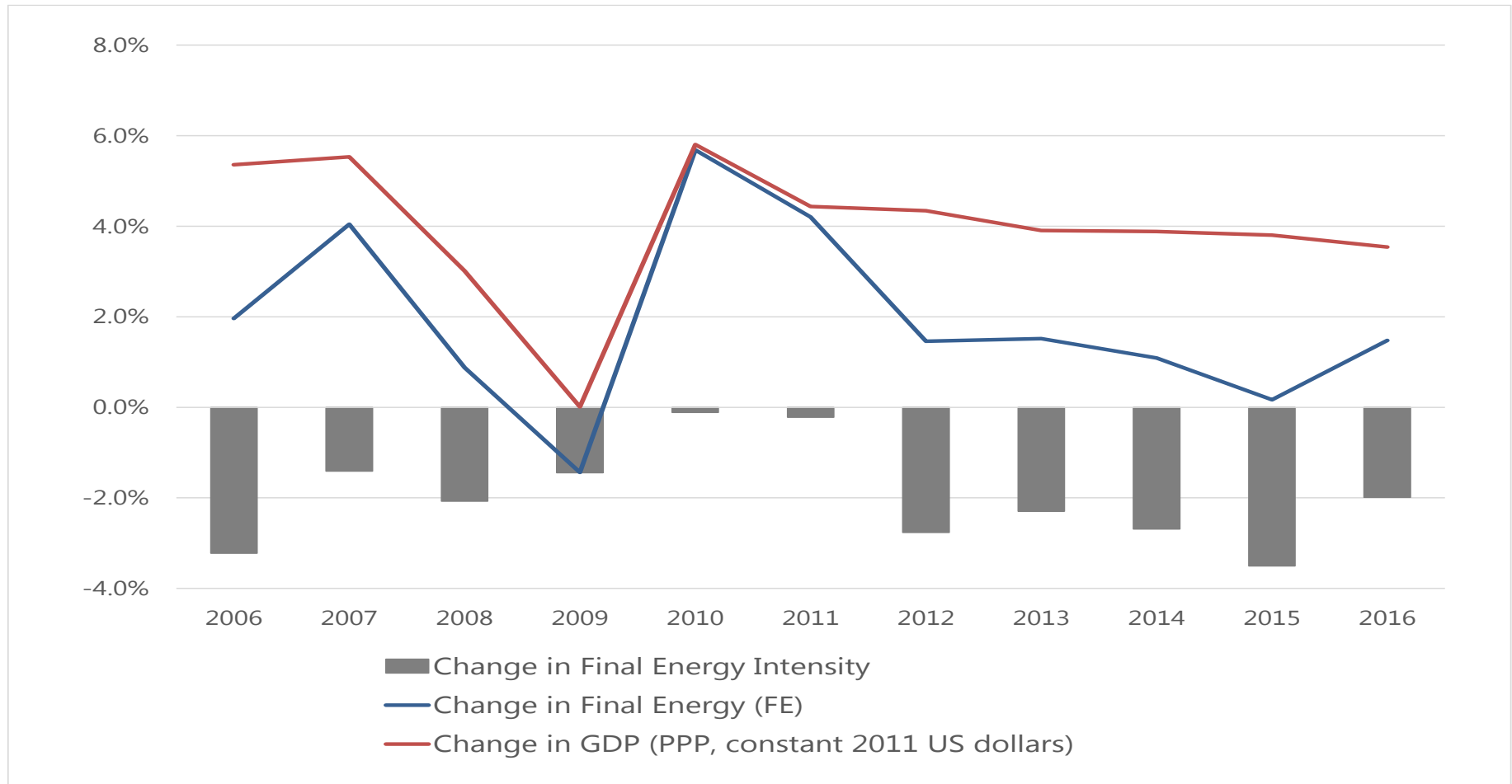
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Trend to 2035
Change in Final Energy (FE)	2.0%	4.0%	0.9%	-1.4%	5.7%	4.2%	1.5%	1.5%	1.1%	0.2%	1.5%	
Change in GDP (PPP, constant 2011 US dollars)	5.4%	5.5%	3.0%	0.0%	5.8%	4.4%	4.3%	3.9%	3.9%	3.8%	3.5%	
Change in Final Energy Intensity	-3.2%	-1.4%	-2.1%	-1.4%	-0.1%	-0.2%	-2.8%	-2.3%	-2.7%	-3.5%	-2.0%	-45.1%

Source: APEC statistics and APERC analysis.

- Final energy consumption intensity (ex. non-energy) has been improving reasonably consistently with the largest reduction in 2015.
- Final energy consumption intensity (ex. non-energy) fell 19.8% between 2005 and 2016.
- If the current trend continues, final energy consumption intensity (ex. non-energy) reduction would meet the APEC goal: 45% in 2035.

GDP and energy consumption remain decoupled

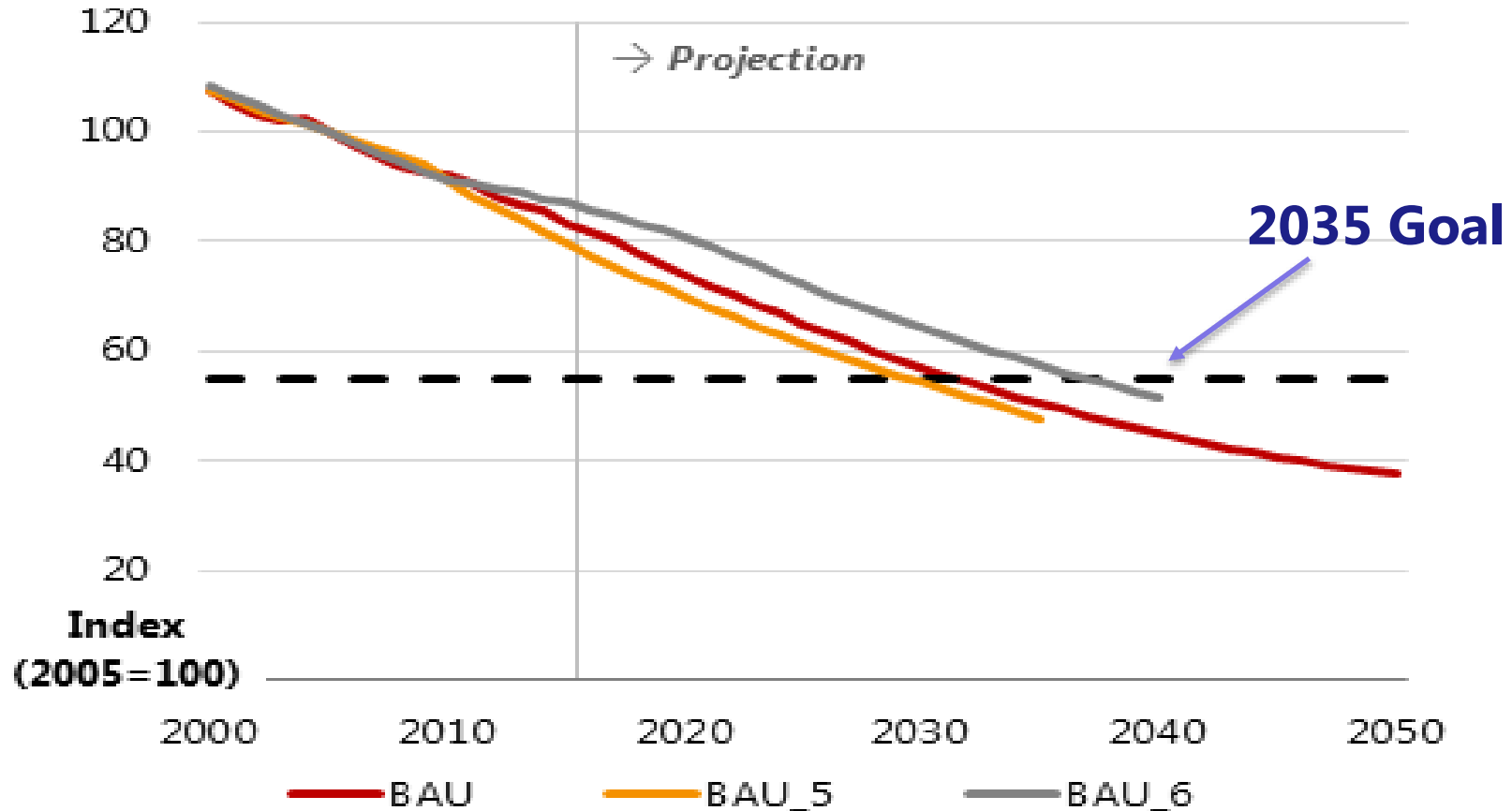
Annual changes to intensity, energy demand and GDP, 2006-2016



Source: APEC statistics and APERC analysis.

APEC reaches intensity goal by 2032 in 7th edition

APEC business-as-usual energy intensity by edition, 2000-2050

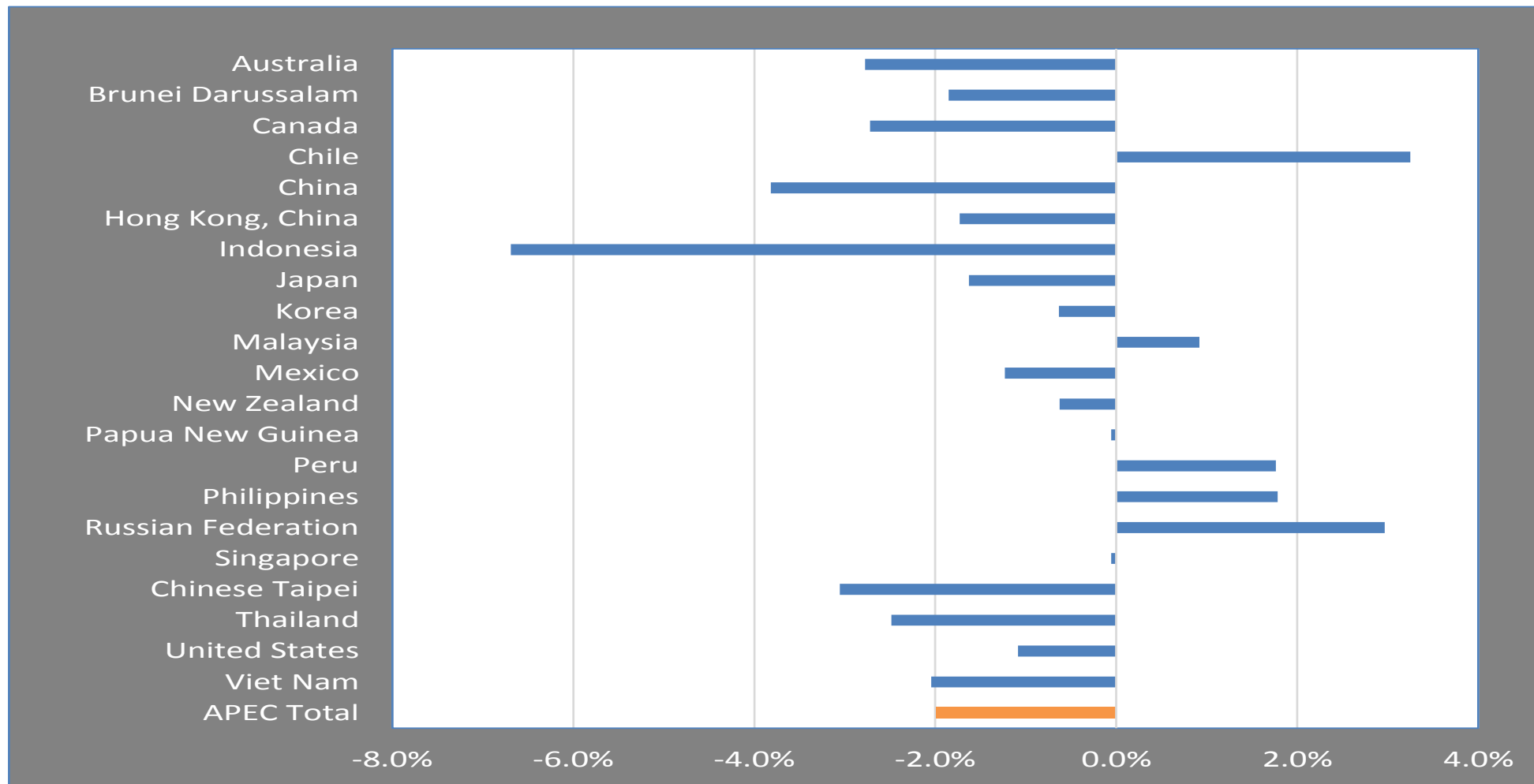


7th edition projects reaching the intensity goal five years earlier than the 6th edition.

Source: IEA statistics 2017 and APERC analysis.

In the short run, not all economies have decoupled

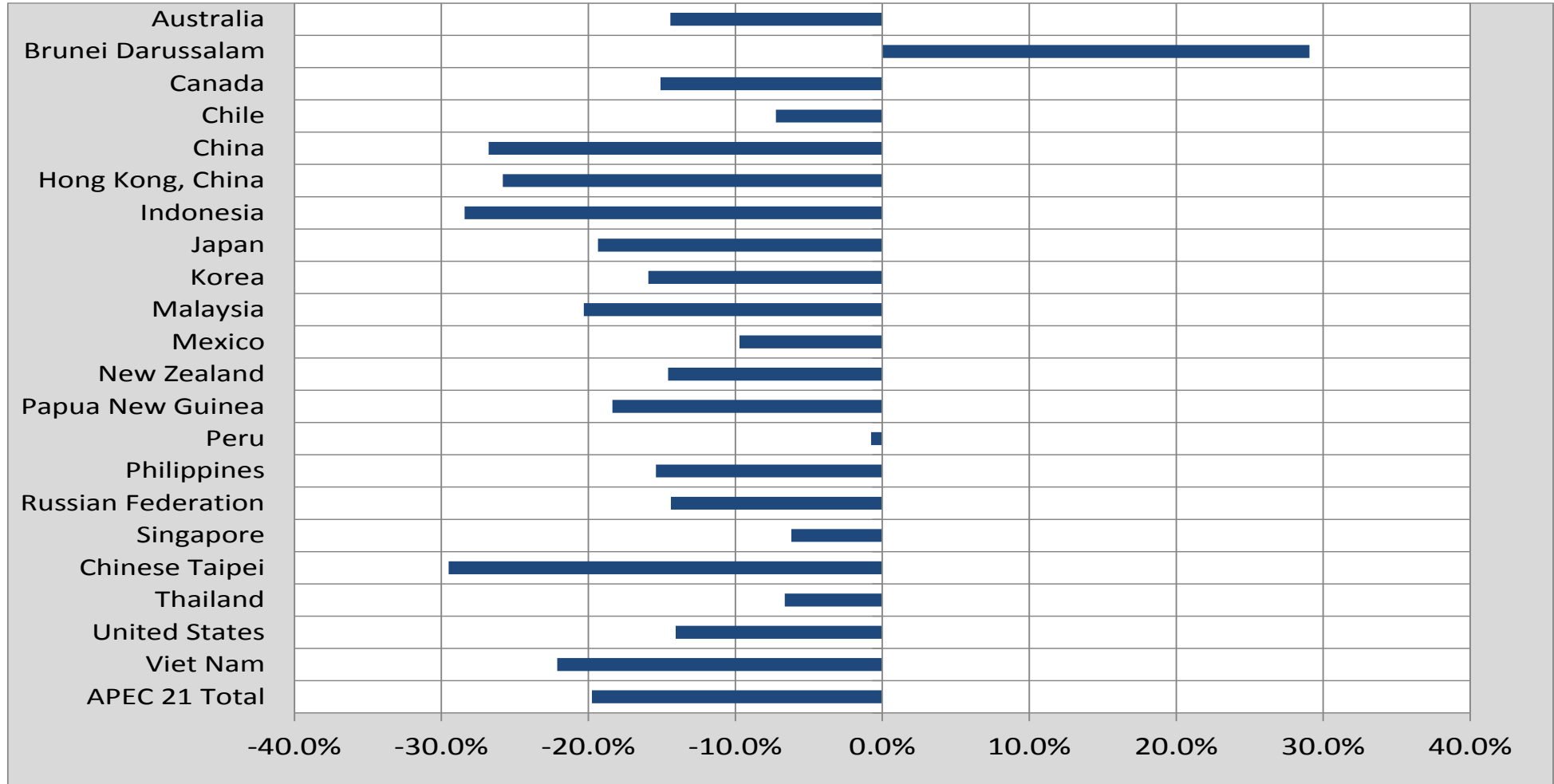
Economy energy intensity changes, 2015 to 2016



Source: APEC statistics and APERC analysis.

In the long run, most economies have decoupled

Economy energy intensity changes, 2005 to 2016



Source: APEC statistics and APERC analysis.

Next steps

- EGEEC supports decomposition of energy demand and development of energy efficiency measures to better understand the underlying causes of changes in energy intensity.
- EGEEC had preliminary discussions about updating the intensity goal.
- After the publication of the APEC Energy Demand and Supply Outlook 7th Edition, APERC will develop a plan to study energy intensity trends and targets.

Closing thoughts: better data = better analysis

- Trends look good; decoupling seems likely to continue.
- Decomposition and energy efficiency measures are needed to tell us about the underlying causes of changes in energy intensity.
- More useful analysis requires more detailed data, which can be a challenge (or opportunity...) for EGEDA members.



Thank you for your kind attention

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