



APEC Expert Group on Energy Data and Analysis 2013

November 2013



Asia-Pacific
Economic Cooperation

APEC

**Energy Demand and
Supply Outlook
5th Edition**

February 2013



Review of APERC 2013 Research Activities and Plan for 2014

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(APERC)

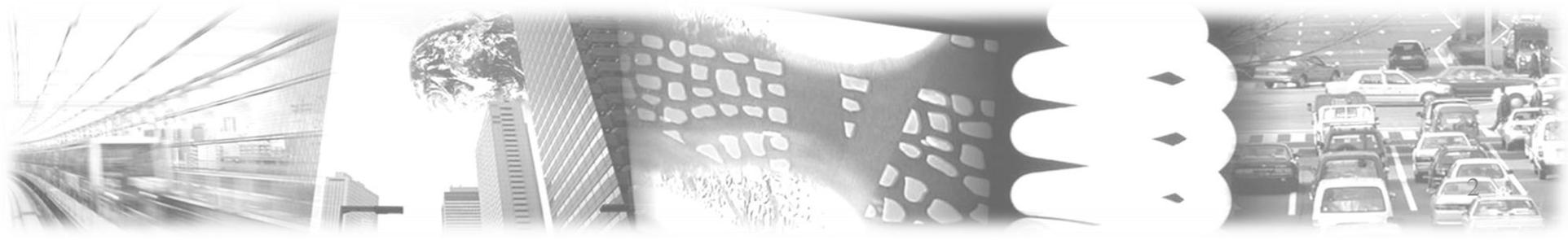
APERC

Asia Pacific Energy Research Centre



**Asia-Pacific
Economic Cooperation**

Review of 2013 Research Activities – Outlook



APEC Energy Outlook



APEC

**Energy Demand and
Supply Outlook
5th Edition**

February 2013



APERC

Asia Pacific Energy Research Centre

- APERC has historically produced an *APEC Energy Demand and Supply Outlook* every 3 or 4 years
- The 5th Edition was published in February 2013
- A *25 year look-ahead* (2010-2035) assuming business-as-usual and several alternative cases

Goals of the Outlook Project

- Help facilitate APEC cooperation by providing policymakers with
 - A **useful reference work** on energy in the APEC region
 - A **statistically-supported** review of the **challenges and opportunities** facing the APEC economies individually and as a region
 - Provide **useful suggestions and inspiration** to policymakers in APEC economies who wish to pursue more sustainable energy policies
 - **Demonstrate the benefits that alternative policies** might have on energy security, environmental protection, energy costs, etc.
- Draws on expertise of APERC researchers, supplemented by advice and feedback from APEC government experts

Contents of the Outlook Report

Volume 1:

Overall APEC Demand and Supply

- Summary of Key Trends
- Overview of APERC's model
- Overall APEC Final Energy Demand by Sector
- Overall APEC Primary Energy Supply by Fuel Type
- APEC Energy Investment Overview
- APEC Carbon Emissions

Volume 2:

Discussion of specific APEC economies

- Introduction to the economy's
 - Energy demand
 - Energy resources
 - Energy policies
- Business-as-Usual Scenario
- Alternative Scenarios
 - High Gas
 - Alternative Urban Development
 - Virtual Clean Car Race

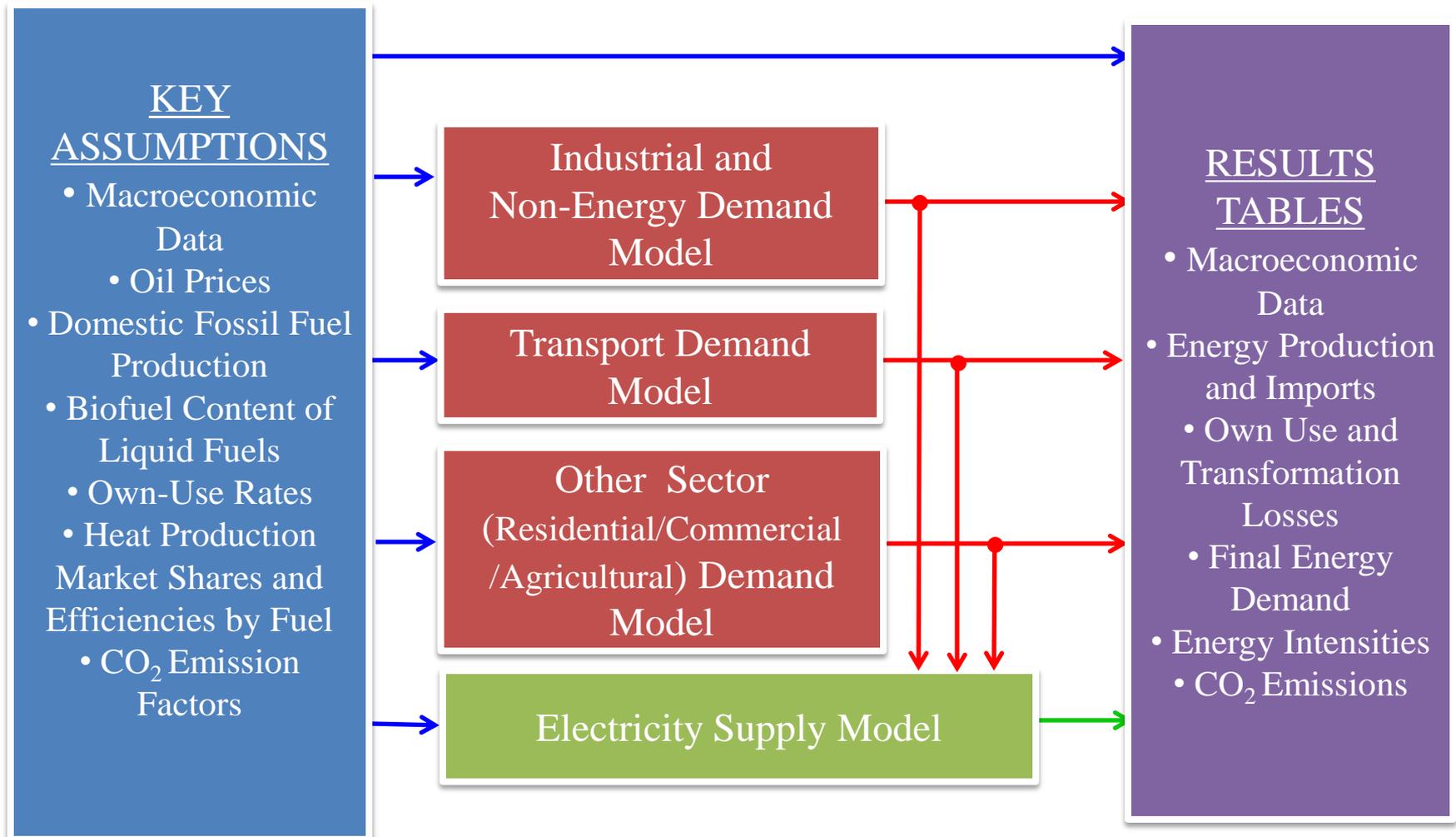
Cases Examined

- “Business As Usual” (BAU) – Assumes existing policy continues, including policies in process of implementation (legislation already approved)
- Three Alternative Cases:
 - High Gas Scenario
 - Alternative Urban Development Scenarios
 - Virtual Clean Car Race

Outlook 5th Edition Models

- Models are **totally new and developed by APERC**
- Designed to **support additional detail** in results
- Designed to **model alternative** policies and technologies
- Designed for **re-use** in future editions of the Outlook

Overall Model Structure



Available for Downloading at <http://aperc.ieej.or.jp/>

The screenshot shows a web browser window with the URL <http://aperc.ieej.or.jp/publications/reports/outlook.php>. The browser's address bar and menu bar are visible. The website header includes the APERC logo (Asia Pacific Energy Research Centre) and navigation links for Search, Site Map, and Contact us. Below the header, there are three main sections: a left sidebar with navigation menus for 'About us', 'Activities', and 'Publications'; a central content area titled 'APEC Energy Demand and Supply Outlook' featuring a book cover for the '5th Edition' (February 2013); and a right sidebar with a 'Contents' table listing various report volumes and supplemental chapters with links to PDF downloads.

Publications

- Reports
 - APEC Energy Demand and Supply Outlook
 - APEC Energy Overview
 - Compendium
 - PREE
 - CEEDS
 - LCMT
 - PRLCE
 - Other research reports
- Papers and presentations
 - APERC Annual Conference

APEC Energy Demand and Supply Outlook

▶ APEC Energy Demand and Supply Outlook 5th Edition

Contents

| | text in pdf | tables in pdf |
|---|-------------|---------------|
| Outlook Volume 1 | | |
| Outlook Volume 1 Individual Chapter Download | | |
| Outlook Volume 2 (Economy Reviews) | | |
| Outlook Volume 2 (Economy Reviews) Individual Chapter Download | | |
| Supplemental Chapter on Energy Investments | | |
| Detailed Results Tables and Graphs for Business-as-Usual | | |
| Detailed Results Tables and Graphs for High Gas Scenario | | |
| Detailed Results Tables and Graphs for Transportation Scenarios | | |



About us

Activities

- ▶ Programs
- ▶ Annual Activities

Publications

Reports

- ▶ APEC Energy Demand and Supply Outlook
- ▶ APEC Energy Overview
- ▶ Compendium
- ▶ PREE
- ▶ CEEDS
- ▶ LCMT
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- ▶ Other research reports

Papers and presentations

- ▶ APERC Annual Conference

APEC Energy Demand and Supply Outlook 5th Edition

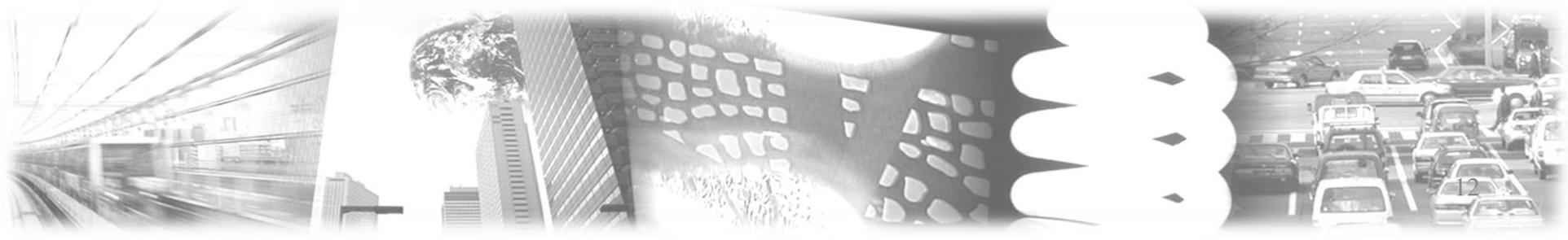
▶ Detailed Results Tables and Graphs for Business-as-Usual

| | |
|---------------------------------------|---|
| Results Documentation | Results Tables Documentation |
| APEC BAU | All APEC Combined Business-as-Usual Detailed Results Tables |
| Australia BAU | Australia Business-as-Usual Detailed Results Tables |
| Brunei Darussalam BAU | Brunei Darussalam Business-as-Usual Detailed Results Tables |
| Canada BAU | Canada Business-as-Usual Detailed Results Tables |
| Chile BAU | Chile Business-as-Usual Detailed Results Tables |
| China BAU | China Business-as-Usual Detailed Results Tables |
| Hong Kong, China BAU | Hong Kong, China Business-as-Usual Detailed Results Tables |
| Indonesia BAU | Indonesia Business-as-Usual Detailed Results Tables |
| Japan BAU | Japan Business-as-Usual Detailed Results Tables |
| Korea BAU | Korea Business-as-Usual Detailed Results Tables |
| Malaysia BAU | Malaysia Business-as-Usual Detailed Results Tables |
| Mexico BAU | Mexico Business-as-Usual Detailed Results Tables |
| New Zealand BAU | New Zealand Business-as-Usual Detailed Results Tables |
| Papua New Guinea BAU | Papua New Guinea Business-as-Usual Detailed Results Tables |

Outlook Follow-Up

- Media releases – Local Japan and APEC Website
- Road show
 - Southeast Asia
 - Malaysia
 - Singapore
 - Indonesia
 - Philippines
 - Latin America
 - Peru
 - Chile
- APERC Seminar for Thai Ministry of Energy study mission to Japan

Review of 2013 Research Activities – Other Activities



Research Support for APEC's Energy Intensity Goal

- Progress Update was presented to EWG 44 (Washington, USA, November 2012)
- Another progress update will be presented at EWG 46 (Da Nang, Viet Nam, November 2013)
- Paper “The unexpected challenges of using energy intensity as a policy objective: examining the debate over the APEC energy intensity goal” accepted for publication in *Energy Policy*

APEREC Annual Conference and Advisory Board Meeting

- Held in Tokyo in February, 2013
- Approximately 40 invited experts participated
- Sessions on
 - Outlook: The Big Picture
 - Outlook: Better Urban Planning Scenario
 - Outlook: Virtual Clean Car Race Scenario
 - Distributed Combined Heat and Power
 - Electricity Trade in the APEC Region
 - Future APEREC Research Activities
- Special workshop on Urban Planning and Energy

Published Research

- “The United States experience as a reference of success for shale gas development: the case of Mexico” by Juan Roberto Lozano Maya, *Energy Policy*, November 2013
- “The unexpected challenges of using energy intensity as a policy objective: examining the debate over the APEC energy intensity goal” by Ralph D. Samuelson, *Energy Policy* in publication
- “Putting emission limitation on a solid foundation: why effective international cooperation needs to start with trade issues” by Ralph D. Samuelson, *IAEE Energy Forum*, 4th Quarter 2013

Website Enhancements

The screenshot displays the APERC website interface. At the top, the navigation bar includes the APERC logo, the text 'Asia-Pacific Economic Cooperation' and 'Asia Pacific Energy Research Centre', and links for 'Search', 'Site Map', and 'Contact us'. Below this, there are links for 'Energy Smart Communities Initiative (Low Carbon Model Towns)', 'APEC Energy Database', and 'JODI (Joint Organisations Data Initiative)'. The main content area features a 'What's New' section with a list of recent publications and reports, each with a date and a category tag (e.g., 'Material', 'Report', 'News'). A sidebar on the left contains several menu items: 'About us', 'Activities' (with sub-items 'Programs' and 'Annual Activities'), 'Publications' (with sub-items 'Reports', 'Papers and presentations', and 'Other research reports'), and 'Papers and presentations' (with sub-items 'APERC Annual Conference', 'EGEDA', 'EWG', and 'EMM'). A large image of a modern city with solar panels is visible in the background of the main content area.

Navigation Bar:
APEC Asia-Pacific Economic Cooperation APERC Asia Pacific Energy Research Centre
Search Site Map Contact us
Energy Smart Communities Initiative (Low Carbon Model Towns) APEC Energy Database JODI (Joint Organisations Data Initiative)

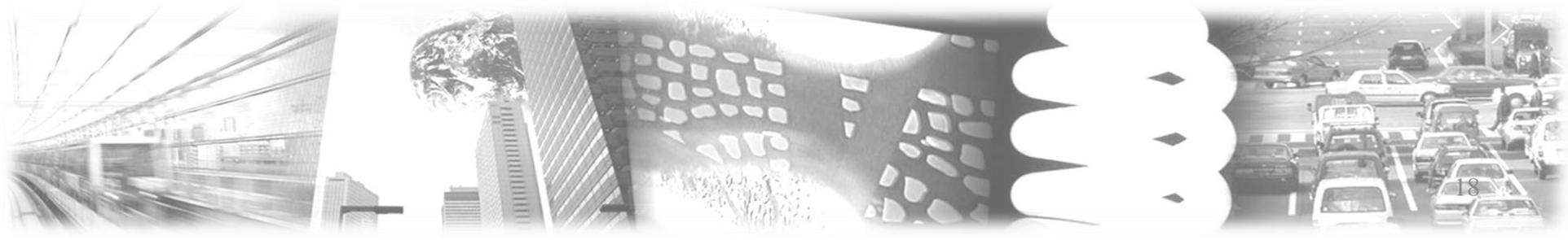
Left Sidebar:
The Second LNG Producer-Consumer Conference
10 September, 2013
About us
Activities
Programs
Annual Activities
Publications
Reports
APEC Energy Demand and Supply Outlook
APEC Energy Overview
Compendium
PREE
CEEDS
LCMT
PRLCE
Other research reports
Papers and presentations
APERC Annual Conference
EGEDA
EWG
EMM

What's New:
2013/09/17 **Material** [The 2nd LNG Producer-Consumer Conference](#)
2013/08/21 **Report** [Policy Review for Low-Carbon Town Development Project in Koh Samui, Thailand: Final Report](#)
2013/07/24 **Report** [PREE reports for Chinese-Taipei, Indonesia, Malaysia, Peru, and Philippines have been uploaded.](#)
2013/07/08 **News** [The APEC Energy Demand and Supply Outlook 5th Edition Detailed Results tables for the Business-as-Usual and High Gas Scenario have been corrected. The corrections are minor and affect primarily the Heat Generation sheets.](#)
2013/06/28 **Report** [APEC Energy Overview 2012](#)
2013/05/30 **Report** [The Concept of the Low-Carbon Town in the APEC Region, Second Edition](#)
2013/05/01 **Report** [Peer Review on Energy Efficiency in Peru](#)
2013/04/25 **Material** [The 1st APEC Oil and Gas Security Forum](#)
2013/03/22 **Material** [APERC Annual Conference 2013](#)
2013/02/22 **Report** [APEC Energy Demand and Supply Outlook 5th Edition](#)
2012/12/28 **Material** [LNG Producer - Consumer Conference](#)
2012/11/09 **Report** [Peer Review on Energy Efficiency in Philippines](#)
2012/11/09 **Report** [Final Report PRLCE Phase 1 in Thailand](#)
2012/06/01 **Report** [Peer Review on Energy Efficiency in Indonesia](#)
2012/04/10 **Report** [Compendium of Energy Efficiency Policies of APEC Economies 2011](#)
2012/01/10 **Report** [APEC Energy Overview 2011](#)
2011/11/30 **Report** [Policy Review for Yuliapu CBD, Tianjin, China](#)
2011/10/10 **Report** [The Concept of the Low-Carbon Town in the APEC Region](#)
2011/05/01 **Report** [Peer Review on Energy Efficiency in Malaysia](#)
2011/04/19 **Report** [Compendium 2010](#)

Recent Staff Changes

- Departures
 - Dr. Bing Chwen Yang, Chinese Taipei, November 2012
 - Ms. Gayathiri Bragatheswaran, Australia, March 2013
 - Dr. Tran Thanh Lien, Viet Nam, May 2013
 - Ms. Chisato Katsuki, Japan, May 2013
- Arrivals
 - Mr. Chrisnawan Anditya, Indonesia, December 2012
 - Dr. Du Bing, China, January 2013
 - Mr. Takashi Otsuki, Japan, April 2013
 - Mr. Yeong-Chuan Lin, Chinese Taipei, July 2013
 - Dr. Hooman Peimani, Canada, October 2013
 - Ms. Naomi Wynn, Australia, November 2013
 - Dr. Atit Tippichai, Thailand, expected December 2013
 - Ms. Tran Thi Lien Phuong, Viet Nam, expected January 2014
 - Dr. Brantley Liddle, USA, expected January/February 2014

Plan for 2014 Research Activities



Outlook Model Enhancements in Progress

- Upgraded Transportation Fleet Model based on STELLA software
- Upgraded Electricity Supply Model based on GAMS software
- New Macroeconomic Model based on the work of CEPII (French national economic research institute)
- New Industrial Demand Models

Topical Research Work in Progress

- Barriers to Shale Gas Development in APEC economies
- Barriers to Geothermal Electricity Development in APEC economies
- Barriers to Combined Heat and Power development in APEC economies
- Benefits of Electricity Interconnection in Northeast Asia
- Projecting Long-Run Light Vehicle Saturation in Developing Economies
- Space Cooling as a Development Goal

Preliminary Schedule for Outlook 6th Edition

- Feb 2014 – Initial model results for BAU scenario created for all economies
- March 2014 – Alternative scenarios designed and agreed-upon
- April 2014 – Example economy review written and agreed-upon
- May 2014 – Model results for BAU case finalized for all economies
- June 2014 – Initial drafts of economy reviews (Volume 2) completed for all economies except for alternative case discussions
- July 2014 – Models results for alternative cases finalized for all economies
- August 2014 – Alternative case discussions added to economy reviews

Preliminary Schedule for Outlook 6th Edition

- September 2014 – Initial drafts of topical discussions (Volume 1) completed
- October 2014 – Economy reviews (Volume 2) sent to editor
- November 2014 – Topic discussions (Volume 1) sent to editor
- December 2014 – Volume 2 editing completed
- January 2015 – Volume 1 editing completed
- February 2015 - External reviews begin of draft Outlook 6th Edition
- March 2015 – Preparations for Outlook 6th Edition publication completed, including web site design and publicity plan
- April 2015 – Outlook 6th Edition published



Thank You

<http://aperc.ieej.or.jp/>

