3. Follow-up Peer Review on Energy Efficiency (PREE) in Thailand

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Presentation Outline

1. PREE and Follow-up PREE Background Information


3. The Follow-up PREE in Thailand Report
1.1- PREE and Follow-up PREE Background information

- **Original PREE:**
  - Broad review of energy efficiency policies and measures.
  - Provide recommendations on how these policies and measures might be improved.
  - A Report on the experts’ findings, which includes findings, achievements and recommendations.

- **Follow-up PREE:**
  - Same as above, but focuses on one or two energy use sectors, not economy wide.
  - The 1\textsuperscript{st} Follow-up PREE (Viet Nam) focused on energy data (workshop).
  - The 2\textsuperscript{nd} Follow-up PREE (Philippines) focused on the sugar, glass and cement industries, and the commercial buildings sectors (report).
  - This Follow-up PREE focused on the transport sector (report).
### 1.2- Five phases of PREEs, ten PREEs and three Follow-up PREEs

<table>
<thead>
<tr>
<th>Phase</th>
<th>Country/Region and Date</th>
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<tbody>
<tr>
<td>P1</td>
<td>New Zealand (Feb 2009)</td>
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<td>Chile (Mar 2009)</td>
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<td>Viet Nam (Jun 2009)</td>
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<td>Thailand (Nov 2009)</td>
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<td>P2</td>
<td>Chinese Taipei (Aug 2010)</td>
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<td>Peru (Nov 2010)</td>
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<td>Malaysia (Dec 2010)</td>
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<td>P3</td>
<td>Indonesia (Oct 2011)</td>
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<td>Philippines (Feb 2012)</td>
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<td>Follow-up PREE in Vietnam (Feb 2012)</td>
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<td>Workshop Style</td>
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<td>P4</td>
<td>Brunei Darussalam (Jun 2013)</td>
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<td>Follow-up PREE in the Philippines (Sep 2014)</td>
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<td>P5</td>
<td>Follow-up PREE in Thailand (Aug 2015)</td>
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34 Recommendations on:

- Institutional Context (2)
- Energy Efficiency Goal, Targets and Strategy (4)
- Energy Data Collection and Monitoring (3)
- Appliances and Equipment (5)
- Energy Efficiency related R&D (3)
- Industry Sector (4)
- Electricity Sector (2)
- Commercial and Residential Sector (5)
- Transport Sector (6)
2.2- Thailand in Brief

- Total primary energy supply (2014) = 136.83 MTOE
  - 81% from fossil fuels.

- Final energy consumption (2014) = 75.80 MTOE
  - Industrial sector to grow 3.0% on average per year to 2040, followed by the building sector at 2.8% and transport sector 2.6%.

- Energy intensity improving.

Share of final energy demand by sector
Source: DEDE, 2014.

Energy intensity
Source: DEDE, 2014.
3.1- The Follow-up PREE Process for Thailand

- Thailand accepted hosting and selected the transport sector. (March 2015)
- EWG Members endorse Follow-Up PREE Phase 5. (June 2015)
- APERC and Thailand form PREE Review Team. (June 2015)
- APERC presented preliminary findings to the EGEE&C46 in Cebu (31 Aug - 2 Sep) (31 Aug - 2 Sep)
- Follow-up PREE Review Team visited Thailand. (3-7 August) (3-7 August)
- Draft Report sent to Thailand 22 Oct and Final Draft 2 on 27 Nov. Approved on 3 December. (31 Aug - 2 Sep)
- Final draft Report endorsed by EWG Members on 11 December. (31 Aug - 2 Sep)
- APERC presents the final Report at EWG50 (December 14-18, 2015) (31 Aug - 2 Sep)
3.2- Draft Report Process

Å Follow-up Peer Review Team visit to Thailand:
  • Meetings with various transport and energy related government agencies and associated bodies.
  • Site visits to an inland container depot, a truck terminal and the Thailand Automotive Institute.
  • Preliminary feedback to the Thai Government.

Å The private sector and the Thai Government are committed to improving energy efficiency and conservation.

Å Progress since the 2010 PREE Report on Thailand, highlighted in the achievements.

Å 48 recommendations divided into 7 sections: (1) Overarching; (2) Transport financing and investment; (3) Urban land use and transport integration; (4) Low carbon transport systems; (5) Travel demand management; (6) Vehicle fuel economy labelling and standards; and (7) High efficient vehicle technology.
R1. The Thai Government should develop a *Memorandum of Understanding* between transport agencies and organisations to share data to improve evidence-based decision-making in the transport sector.

R2. The Ministry of Energy should organise a *regular meeting* with the Ministry of Transport and other relevant ministries to ensure policy coordination and achieve necessary energy saving in transport sector.

R3. The Thai Government should support *local governments* to implement preventive measures to develop efficient public transport systems in medium and small cities in the regions of Thailand.

R4. Reducing fossil fuel subsidies by the Ministry of Energy was a remarkable success and will make energy efficiency measures through *price mechanisms (incentives, taxes, etc.*) more workable. The Thai Government should continue to employ those measures, while monitoring and evaluating their policy effects.

R5. The Thai Government should continue to raise public awareness in transport energy efficiency through various events and media.

R6. *Policymakers in the relevant ministries* (including the Ministry of Energy and the Ministry of Transport) should continue to listen to the opinions/concerns of policy implementing bodies, the business sector and the public.
3.4- ‘Transport Financing and Investment’ Recommendations (7)

- R7. Expanded and more flexible use of the ENCON fund (for policy support, infrastructure development, local government investments, subsidies) should be promoted in the transport sectors and regional governments agencies.
- R8. Better energy pricing to reflect cost of supply, and gradually the public costs (safety, local pollution and greenhouse gases).
- R9. Moving from an input-based to output-based taxation regime, and creating a fiscal space for transport investment.
- R10. More structured local government finance for improving first/last mile infrastructure including pedestrian and cycling facilities, and encouraging the use of public transport.
- R11. Prudent policies on internationally funded projects, and consolidation of three railway systems (narrow gauge, standard gauge and high speed system) into the regional/international rail networks.
- R12. Increasing the capacity to manage PPP scheme by gradual introduction of private sector partnership (management contract, extended turnkey, availability payment, VGF/partial construction support and guarantee scheme, BOT/BTO).
- R13. Expanded role of the MRTA to manage and finance TOD projects and negotiate in a B2B (Business to Business) arrangement with property owners around stations.
3.5- ‘Urban Land Use and Transport Integration’ Recommendations (7)

- **R14.** Implement *car restrictions* and *congestion controls*.
- **R15.** Design the area around rail stations ‘precincts’ carefully to include a number of features including walkability, greening, mixed-use development and bicycle access.
- **R16.** Carefully assess railway precinct areas before making planning decisions.
- **R17.** Fund the costs of new public transport lines from *the profits of land development*.
- **R18.** Continually improve public transit amenity, including access, information systems, shelters, timetables, and consistent colour-coding.
- **R19.** Make all railway stations *multi-modal interchanges*.
- **R20.** Create circumferential MRT services to connect *sub-centres* away from the CBD.
3.6- ‘Low Carbon Transport Systems’ Recommendations (5)

- **R21.** Improve data collection on *passenger and cargo movement*, and traffic data such as VKT and emissions factor.

- **R22.** Improve the *Bangkok’s Transport Master Plan* to include the role of *feeder transport*.

- **R23.** Reform the bus system in *Bangkok* to improve its overall system strategic planning, network planning and operations.

- **R24.** Develop a plan to *improve MRT capacity*.

- **R25.** Develop more strategic plans for freight transport within of the ‘*Lean Logistics*’ program’s framework.
3.7- ‘Travel Demand Management’ Recommendations (10)

- R27. Set KPIs for mode share, bus and rail ridership, and VKT, and collect data to track trends.
- R28. Conduct a detailed road pricing study, considering several design options.
- R29. Educate the public about road pricing policy.
- R30. Conduct a study on the measures to increase the cost of vehicle acquisition and ownership, along with adopting alternatives such as city-owned car sharing services and extending the efficient operation of public mass transport system.
- R31. Increase the cost of vehicle ownership by raising economy-wide vehicle excise tax and car registration fees based on carbon emissions emitted.
- R32. Unify the ticketing system across all modes of transit.
- R33. Introduce employer subsidised transit passes.
- R34. Implement road pricing and create an office for Mobility Management.
- R35. Supporting the use of IT in the transport/logistics industries (on demand service, virtual marketplace).
3.8- ‘Vehicle Fuel Economy Labelling and Standards’ Recommendations (7)

- R36. Institutionalise an annual review of the taxation scheme and establish ‘a committee’ to check whether the intended outcome is being achieved.
- R37. Policies and incentives for vehicle manufacturers under Eco Car Phase II should include other vehicle types, e.g. 2-wheelers.
- R38. Explore the adoption of a feebate system that provides fees for less efficient vehicles and rebates to more efficient vehicles.
- R39. Explore the adoption of Minimum Energy Performance Standards (MEPS) as mandatory standards for LDVs.
- R40. Include a comparison reference point in the Eco-Sticker labelling.
- R41. Analyse how the Eco-Sticker can apply to second-hand vehicles.
- R42. Establish a database of the sales of new vehicles, including detailed information, e.g. engine size, fuel, etc through the Excise Department, for example.
3.9- ‘High Efficient Vehicle Technology’ Recommendations (6)

- **R43.** Develop policies for encouraging the adoption of *more efficient electric 2-wheelers*, particularly for urban traffic.
- **R44.** Remove speed limit requirements for electric 2-wheelers, adding optional safety measures (banning them from highways for example), to *allow the market to develop*.
- **R45.** Analyse the potential for using of *LNG for trucks* along suitable corridors.
- **R46.** Address the emissions efficiency of *the passenger and freight maritime sector* and develop appropriate policies.
- **R47.** More analysis should be done on *hybrid cars and buses in Bangkok’s start-stop traffic*, as their efficiency is currently greatly underestimated.
- **R48.** Supporting the replacement of *old vehicles* and old vehicle technologies with *more energy efficient vehicles/vehicles technologies (e.g. electric vehicles)* for the domestic market, i.e. using tax incentives and promoting public awareness of this issue.
Photos from the team visit...

Thank you

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