Flagship Projects of the Department of Highways

Presented by

Dr. Montri Dechasakulsom

(Director of Highway Office, Department of Highways)

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Topics of Discussion

1. Overview of the Department of Highways

2. Flagship Projects
   2.1 Motorway Projects
   2.2 Highway Financing (for Motorways)
      ▫ Public Private Partnership (PPP)
      ▫ Thailand Future Fund
   2.3 Highway Development Projects Under
      “Thailand’s Transportation Infrastructure Strategic Plan 2015 – 2022”
      ▫ Four-lane Highway Widening Projects
      ▫ Overpasses and Flyover U-turns on Major Highways
      ▫ International Highway Development Projects
      ▫ Railway Overpass Bridges
Overview of the Department of Highways
Missions

• Develop (Construct) highway network to
  ▫ Support logistic and multimodal transport
  ▫ Promote AEC connectivity

• Operate and maintain highway network
• Road safety management
• Be responsible for highway technology and innovation
The DOH is responsible for 3 types of highways:

- National Highways
- Motorways
- Concession Highway (for more than 70,000 Km.)
Missions

- Construction of Four-lane Highway Widening Projects
- Intermodal–supporting Highway Development
- International Highway Development Projects
- Major Intercity Highway Maintenance
- Construction of Overpasses and Flyover U–turns on Major Highways
- Construction of Intercity Motorways

Highway Construction

Highway Maintenance

Safety Management
In the Fiscal Year 2016
The DOH is received 79,405 (million baht) budget allocation.
The Investment Budget of 73,438 Million Baht

- Major Construction Projects: 33%
- Minor Construction Projects (1-year Contract): 26%
- Highway Maintenance: 34%
- Road Safety Management: 7%
Intercity Motorway Network
Present Motorway Network under our Responsibility

- Motorway Link No. M7
  Bangkok – Chon Buri
  (– Pattaya)

- Motorway Link No. M9
  Bang Phli – Bang Pa In
Flagship Motorway Projects

1. Motorway Link: Pattaya – Map Ta Phut

2. Motorway Link: Bang Pa-In – Nakhon Ratchasima

3. Motorway Link: Bang Yai – Kanchanaburi
Flagship Motorway Projects

- Feasibility Study (FS)
- Survey and Detail Design
- Environment Impact Assessment (EIA)
- Expropriation Law

Bang Pa-In – Nakhon Ratchasima
196 Km. / 84,600 Million Baht.

Bang Yai – Kanchanaburi
96 Km. / 55,620 Million Baht.

Pattaya – Map Ta Phut
32 Km. / 20,200 Million Baht.
1. Motorway Link: Pattaya – Map Ta Phut

**Project Overview**

- 4 lane tolled road, Distance 32 Km.
- Extension of M7: Bangkok – Chon Buri – Pattaya
- Total capital expenditure 20,200 Million Baht
  - Construction Cost 14,200 Million Baht
  - Land acquisition compensation 6,000 Million Baht
- Economic Internal Rate of Return (EIRR) 17 %
- Timeline for Project Construction 2016 – 2019

**Project Status**

- Presently, the civil work has already been under construction, using Procurement Public Sector Comparator (PSC or Traditional Procurement)
- Financing from “Construction Financing from Toll Collection Fund”
- For the operation and maintenance, the DOH plan to implement by ourselves.
- For the service center, the DOH will open to Public Private Partnership (PPP).
2. Motorway Link: Bang Pa-In – Nakhon Ratchasima

**Project Overview**

- 4 – 6 lane tolled road
- Distance 196 Km.
- Total capital expenditure 84,600 Million Baht
  - Construction Cost 77,970 Million Baht
  - Land acquisition compensation 6,630 Million Baht
- Economic Internal Rate of Return (EIRR) 19 %
- Timeline for Project Construction 2016 – 2019

**Project Status**

- The procurement process of the civil work was already stared, using Procurement Public Sector Comparator (PSC or Traditional Procurement)
- Financing through government budget for all the civil work.
- The construction work are about to start at the end of this June.
- For operation and maintenance, the DOH intends to seek the Public Private Partnership (PPP); in addition, the private firm shall itself invest in utility work.
3. Motorway Link: Bang Yai – Kanchanaburi

**Project Overview**
- 4 – 6 lane tolled road
- Distance 96 Km.
- Total capital expenditure 55,620 Million Baht
  - Construction Cost 50,200 Million Baht
  - Land acquisition compensation 5,420 Million
- Economic Internal Rate of Return (EIRR) 15 %
- Timeline for Project Construction 2017 – 2019

**Project Status**
- The procurement process of the civil work was already stared, using Procurement Public Sector Comparator (PSC or Traditional Procurement)
- Financing through government budget for all the civil work.
- The construction work are planed to begin in July this year.
- For operation and maintenance, the DOH intends to seek the Public Private Partnership (PPP); in addition, the private firm shall itself invest in utility work.
Inter – City Motorway Master Plan (2016)
Sources of Finance
Financial Sources of Transportation

• Presently, Thailand is during the critical phase of transportation system reform.

• 20 mega projects in the MOT pipeline are targeted to sign the construction contract within 2 years ahead.

• Only the traditional financing – budget allocation and loan – is of course not enough.

• To keep financial discipline in tag, the public debt sealing is necessary to maintain.

• Public Private Partnership (PPP) is one concrete solution to the problem by
  ▫ Retain debt limit
  ▫ Deduct long-term management responsibilities
  ▫ Promote private sector investment
Public Private Partnership Trend in Thailand

• Presently, Thai Government has encouraged the PPP investment, especially for all competent revenue-generating projects.

• Thailand just passed the new “Private Investments in State Undertakings Act” in 2013 (B.E. 2556).

• The Act covers all public–private joint investment undertaken by any means, or designation of a unilateral private investment by way of a licence or concession or grant of any kind of right.

• By this act, we named “Private Investments in State Undertakings Policy Committee” consisting of the Prime Minister as Chairman to take charge of all PPP activities.

• We now have “Strategic Plan for Private Investments in State Undertakings 2015 – 2019”
Project Approval and Implementation Processes

According to the Private Investments in State Undertaking Act 2013

1. Preparing a project appraisal report
   - Consultant hiring
   - Prepare a proposal

2. Proposal Approval
   - Submit the project appraisal report to the responsible parties/agencies:
     - MOT
     - SEPO
     - NESDB
     - BB
     - PPP committees
     - The Cabinet

3. Preparing Tender Document
   - Select concession committees
   - Select DOH’s concession sub committees
   - Prepare tender document

4. Procurement
   - Examine Private Investment
   - Document preparation
   - Invitation to submit document
   - Pre assessment
   - Project Advertisement
   - Assess Tender Document
   - Document preparation
   - Invitation to tender
   - Examine private entity proposal
   - Negotiation
   - Negotiate

5. Investment Contract Approval
   - Submit draft of investment contract to the related agencies:
     - SEPO
     - Attony–General
     - MOT
     - The Cabinet
   - Sign the contract
PPP Projects in Road Sector

• PPP for the Operation and Maintenance processes
  • Bang Pa In – Nakorn Ratchasrima Motorway Link (under PPP Fast Track)
  • Bang Yai – Karnchanaburi Motorway Link (under PPP Fast Track)

• PPP for the entire project lifecycle
  (Construction, Operation and Maintenance)
  • Nakhon Pathom – Cha Am Motorway Link
  • Extended Motorway Link: Uttara Pi Muk – Bang Pa In
  • Thonburi – Paktho Motorway
  (elevated tolled road on National Highway No. 35)
  • Hat Yai – Thai – Malaysia (Sadao) Border Motorway Link
  • All Rest Areas and Service Centers in the Motorway Network
Motorway Link: Nakhon Pathom – Cha Am

Project Overview

- 4 lane tolled road
- Distance 118 Km.
- Total capital expenditure 80,600 Million Baht
- Economic Internal Rate of Return (EIRR) 17 %
- Timeline for Project Construction 2018 – 2020

Status

Feasibility Study (FS) ✓ (2009)
Environment Impact Assessment (EIA) ✓ (2012)
Survey and Detail Design ✓ (2014)

Procurement Process

- Be included in the PPP plan year 2015 – 2019 under the PPP committees
- During the preparation of the project appraisal report, in accordance with the Private Investments in State Undertakings Act B.E. 2556 (2013)
Extended Motorway Link: Uttara Pi Muk – Bang Pa In

Project Overview

- 6 lane tolled road
- Elevated highway on Phaholyotin Rd. (18 Km.)
- The extension of Don Mueng Tollway to connect with Bang Pa In – Nakhorn Rat Chasima Motorway
- Total capital expenditure 24,000 Million Baht

Status

- Survey and Detail Design ✔️
- During Investment Plan Preparation

Procurement Process

Be included in the PPP plan year 2015 – 2019 under the PPP committees
Motorway Link: National Highway Route 35 (Thonburi – Paktho)

Project Overview

• 6-lane elevated tolled road on Rama 2 highway
• Distance 75 Km.
• Starting at Karnchanapisek ringroad and ending at Pak Tor District, Ratchaburi
• Total capital expenditure 89,000 Million Baht
• Timeline for Project Construction 2019 – 2021

Status

Feasibility Study (FS)  ✔️ (2014)
Survey and Detail Design  During the process
(Plan to finish early 2017)

Procurement Process

• Be included in the PPP plan year 2015 – 2019 under the PPP committees
Motorway Link: Hat Yai–Thai-Malaysia Border

Project Overview

• 4 lane tolled road
• Distance 52 Km.
• Link Hat Yai District to the 2nd Sadao Border
• Total capital expenditure 30,000 Million Baht
• Timeline for Project Construction 2018 – 2020

Status

• The Feasibility Study (FS) ✔ (2015)
• Survey and Detail Design Plan to finish in 2016

Procurement Process

• Be included in the PPP plan year 2015 – 2019 under the PPP committees
Thailand Future Fund
Presently, the State Enterprise Policy Office (SEPO) and the Department of Highways plan to include the existing motorway No. 7 and 9 into the Thailand Future Fund.
Highway Development Projects under
“Thailand’s Transportation Infrastructure Strategic Plan 2015 – 2024”
Highway Development Projects Under
Thailand’s Transportation Infrastructure Strategic Plan 2015 – 2022

- Construction of Four-lane Highway Widening Projects
- Construction of Overpasses and Flyover U-turns on Major Highways
- International Highway Development Projects
- Construction of Railway Overpass Bridges
Construction of Four-lane Highway Widening Projects

**Purpose**
- Mitigate traffic congestion and reduce logistic cost after the AEC opening

**Scope of the Project**
- Construct 4-lane highway on 68 routes in 25 districts, 1,908 Km. totally

**Construction Timeline**
- 2015 – 2021 (132,912 Million Baht)

**Project Benefits**
- Travel Time Saving 32 Min/veh
- Employment Creation 29,000 Jobs
- Economic Internal Rate of Return (EIRR) = 26.60%
Construction of Overpasses and Flyover U–turns on Major Highways

**National Highway**

**Route Number**

- Route no. 1 Phahonyothin
- Route no. 2 Mittraphap
- Route no. 4 Phetkasem
- Route no. 32 Asia
- Route no. 34 Bangna – Trat
- Route no. 35 Praram 2
- Route no. 37 Bypass Hua Hin

**Total 7 routes**
Project Purposes
- Mitigate traffic congestion around the border areas
- Promote border trading

Project Scopes
- Construct standard 4-lane highways, 18 routes in 9 border regions

Construction Timeline
- 2015 – 2020 (27,795 Million Baht)

Project Benefits
- Travel Time Saving 25 Min/Veh
- Employment Creation 5,000 Jobs
- Economic Internal Rate of Return (EIRR) = 18.20%
Construction of Railway Overpass

Project Purposes
- Follow the State Railway of Thailand Investment Plan by the Cabinet on 12 April 2010
- To solve the highway-railroad crossing problem

Scope of the Projects
- Construct the railway overpass bridge at the site with T.M. \( \geq 100,000 \) veh-round/day, 83 bridge in 28 districts

Construction Timeline
- 2016 - 2024

Project Benefits
- Dissipate traffic congestion an accidents on highway-railroad crossing sites
- Travel time saving 8 minute/veh
- Employment Creation 7,000 Jobs
- Economic Internal Rate of Return (EIRR) = 21.60%
The End

Question ?