

The Market Sounding for

HIGH SPEED RAIL for Thailand

Fast Track for
the Thai Future



DEVELOPMENT POLICY & ECONOMIC ANALYSIS



High Speed Routes

- ▶ Northern Routes
Bangkok-Chiang Mai
- ▶ Northeastern Routes
Bangkok-Nong Khai
- ▶ Eastern Routes
Bangkok-Chachoengsao-Rayong
- ▶ Southern Routes
Bangkok-Padang Besar



Passenger Forecasts for High Speed Train

- ▶ The National Model (NAM) developed by OTP (Office of Transportation and Traffic Policy and Planning)
- ▶ Additional tourist demand was used for the passenger demand forecast.



Passenger
Forecasts



Passenger Forecasts for High Speed Train

Trips/Day

| | Route | 2017 | 2022 | 2027 | 2032 |
|-----------|----------------------|--------|--------|--------|--------|
| North | Bangkok-Chiang Mai | 28,900 | 32,600 | 34,400 | 36,400 |
| Northeast | Bangkok-Nong Khai | 41,000 | 46,400 | 52,000 | 59,700 |
| East | Bangkok-Rayong | 13,800 | 15,600 | 22,500 | 29,700 |
| South | Bangkok-Padang Besar | 44,200 | 50,000 | 57,300 | 66,300 |

Economic Analysis

- The economic analysis results using 12% discount rate
- Most of the routes pass the economic criteria (EIRR • 12%, NPV • 0 and B/C • 1).



Economic Analysis for High Speed Train Development

| Route | Distance (Km.) | Max. Speed (Km./Hr.) | Avg. Travel Time (Hr.) | Initial Investment* (Million Baht) | Passenger (Trips/Day) | Max Fare (Baht/Trip) | EIRR (%) |
|--------------------|----------------|----------------------|------------------------|------------------------------------|-----------------------|----------------------|----------|
| Bangkok-Chiang Mai | 745 | 250 | 3.73 | 229,809 | 34,800 | 1,190 | 13.58 |
| Bangkok-Nong Khai | 615 | 250 | 3.08 | 201,449 | 41,000 | 984 | 17.76 |

Economic Analysis for High Speed Train Development

| Route | Distance (Km.) | Max. Speed (Km./Hr.) | Avg. Travel Time (Hr.) | Initial Investment* (Million Baht) | Passenger (Trips/Day) | Max Fare (Baht/Trip) | EIRR (%) |
|-----------------------------|----------------|----------------------|------------------------|------------------------------------|-----------------------|----------------------|----------|
| Bangkok-Chachoengsao-Rayong | 221 | 250 | 1.11 | 72,265 | 13,200 | 350 | 13.05 |
| Bangkok-Padang Besar | 982 | 250 | 4.91 | 297,880 | 44,200 | 1,571 | 15.42 |

High Speed Train Thai-China

| Route | Distance (Km.) | Stations | TOD (Million Baht) | Initial Investment* (Million Baht) | FIRR % | EIRR % | EIRR (%) (Wider Economic Benefit) |
|---------------------------|----------------|----------|--------------------|------------------------------------|--------|--------|-----------------------------------|
| Bangkok-Nakhon Ratchasima | 253 | 6 | 100,000 | 179,000 | 2.56 | 8.56 | 11.68 |

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Economic Analysis for High Speed Train New Study by OTP

| Route | EIRR (%) |
|---------------------------|----------|
| Bangkok-Phitsanulok | 12.5 |
| Bangkok-Chiang Mai | <12 |
| Bangkok-Nakhon Ratchasima | 11.68 |
| Bangkok-Nong Khai | 13.00 |
| Bangkok-Hua Hin | 8.11 |
| Bangkok-Surat Thani | 12.5 |

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Thank you