

# 2008

## **Overview of Thailand's Infrastructure Development: Past and Present**



# I. OVERVIEW OF THAILAND'S INFRASTRUCTURE DEVELOPMENT: PAST AND PRESENT

## 1. Introduction

Infrastructure plays a crucial role in economic development and enrichment of living standards. In economic development, appropriate infrastructure can improve the investment climate, facilitate trade processes, and increase efficiency in everyday business activities. Access to infrastructure services such as electricity and water can greatly enhance a society's living standards. Development of infrastructure is dynamic. Various stages of economic development require different levels of infrastructure upgrades or enhancements to properly accommodate changing types of economic and social activities.

The term "infrastructure" is rather broad and covers many activities. In this report, infrastructure is categorized into the following subsectors: transport, energy, telecommunications, and water, sanitation and low-income housing.

**Transport** - Transport development directly contributes to an improvement in standards of living. Roads provide access to schools and hospitals and connect communities. Urban mass transit saves time and expense. And inter-city passenger transport makes it more convenient for people to travel either for pleasure or business. In addition, transport development can help to facilitate economic development, for example, by reducing the costs of doing business.

**Energy** - Energy is a necessity for everyday life as well as for production. Energy issues mainly revolve around scarcity, security, and pricing. Rising oil prices reinforce the significance and at the same time encourages the need to promote energy efficiency and renewable energy. The bottom line is that every activity requires energy; the question is how one can utilize it in a sustainable way.

**Telecommunications** - Widespread availability of affordable broadband access infrastructure will be instrumental in developing a widespread "information economy" and facilitate e-commerce. This is a dominant theme for developed and middle income countries, and the next major area for productivity improvement after industrialization. Thailand needs to develop and implement policies for its telecommunications sector that promote timely and cost-effective deployment of new technologies while supporting adequate and fair competition.

**Water, sanitation and low-income housing** - The core issues for water provision and appropriate sanitation services are basic consumption, health, and hygiene concerns. Adequate water supply is a pre-condition for poverty reduction and improved livelihoods and a basic factor of production for industrial activities. Sanitation systems, such as waste and wastewater management, are essential to protect the environment and sustain standards of living in urban and rural areas.

Infrastructure development in each of the subsectors eventually translates into the well-being of a population, either directly or indirectly through business and production. The key concern in infrastructure development is that the costs and benefits of normally large investments are distributed fairly, and the policy and its framework address the right priorities.

Infrastructure development can also enhance, or sometimes impede, economic development in a much less tractable way. As most infrastructure projects require a large amount of financial and other resources, the government often faces choices and dilemmas in prioritizing projects. A good project gone wrong or a wrong project selection leads to an inefficient use of public money; creates problems with the public and incurs losses for the public. Careful planning is required to ensure effectiveness of infrastructure development.

## 2. Thailand's Infrastructure Development

Thailand is facing a series of infrastructure challenges, including, for example, the need to “catch up” with economic development (within the country and with the competing economies), manage growing urban areas, and ensure sufficient basic services for the poor.

Most of the infrastructure development in Thailand has been demand responsive and focused mainly on infrastructure provision. Availability and accessibility appear to no longer be challenges. The road network coverage has reached 98.5% (paved); electricity reaches 99% of the population. The next step for Thailand is to move toward ensuring quality of service deliveries, management, and sound regulation. Because of the government's financial constraints, prioritization is also very important, given the fact that the demand for investment is always larger than the available resources.

While a clear policy framework is needed, the development direction set forth by the policy makers should be based on reliable facts and data reflecting Thailand's current status of infrastructure development. Systematic, periodic, and internationally consistent infrastructure information collection will provide Thai policy makers with good background to better assess the current situation, identify bottlenecks, set clearer policy, and prioritize projects more effectively.

### **3. Infrastructure Development Strategy for NESDB's 10<sup>th</sup> National Plan**

The three areas of infrastructure development identified in the 10<sup>th</sup> National Development Plan are as follows: infrastructure and logistics services, energy efficiency and alternative sources of energy, and the framework for overall infrastructure development. Below is an outline excerpt from the plan.

**(1) Development of infrastructure and logistics services to support production structural adjustment.** Infrastructure development aims to support the competitiveness and enhance efficiency of the private sector both in production and services sectors.

- (a) Develop up-to-date and efficient transport, logistics services, and telecommunication systems.
  - Develop a domestic and international logistics network through multi-modal transportation, feeder systems, and distribution centers at strategic production locations. Enhanced trade facilitation is also a key concern.
  - Enhance efficiencies in logistics management within the production sectors, particularly along the supply chain
  - Support transport modes and transport management which are energy-efficient, particularly development of rail, waterway, and delivery of energy through pipe lines. Energy-saving transport and increased use of modern technology to reduce the cost of transport is encouraged.
  - Develop an urban mass-transit network to enhance efficiency, safety, time-saving, and reduction of energy usage
  - Develop a telecommunications network that is efficient and up-to-date. Competition in service provision and a return on investment are emphasized, in order to serve production, private, and service sectors, and to enhance government's services.
- (b) Transparent and efficient management of infrastructure under stakeholders' participation.
  - Create stakeholder participation in infrastructure project development
  - Emphasize careful project studies on feasibilities, environmental impacts, social impacts, and health-related impacts to ensure the project's viability with clear mitigation plans
  - Support public-private partnership in infrastructure investment through improved regulations and laws. Regulators for each sector are important for consumer protection and transparent and fair competition.
  - Support demand management initiatives, which aims to create awareness in efficient resource utilization

**(2) Improved energy efficiency and expedition of alternative energy initiatives** in order to reduce energy imports, costs to both producers and consumers, and pollution.

- (a) Find new energy sources, both domestic and international, and secure energy reserves that ensure long-term energy security for Thailand.
- (b) Increase energy efficiency in transport, manufacturing, and household sectors through incentives and law enforcement. For example, provide investment incentives for high value-added industries with low-energy consumption and regulations for importing energy-inefficient machinery. Other strategies to enhance energy efficiency are proper city planning, transport structural reform, logistics management, development of rail and waterways as alternative modes of transportation, and industrial cluster development.
- (c) Campaign for energy conservation and for alternative energy usage in every sector. For example, promoting NGV, gasohol, and biodiesel for vehicles. Consultation services for households, and private and public organizations, regarding alternative energy and energy efficiency to help create awareness in energy conservation.
- (d) Research on alternative and renewable energy including new fuel and electricity generating technology. Research should encompass technical, economical, and environmental aspects of alternative and renewable energy. The programs should also include capacity building activities and public information dissemination of research results.

**(3) A framework for fair distribution of benefits of infrastructure development**, particularly in favor of rural areas. This is to enhance access, ensure sufficient provision, and be responsive to the demand for infrastructure. Well-established stakeholder participation, expanded coverage on telecommunications and media, access to clean water through piped water systems in rural areas, and city planning, which will bring residents close to production bases, should lead to better distribution of infrastructure and related services around the country. This should in turn contribute to the alleviation of a rural-urban disparity.

The current situation, sector performance, policy and institutional framework, and investment prospects for each subsector are discussed in detail in Chapter 2 through 5. Chapter 6 concludes by identifying future challenges of infrastructure development in Thailand.