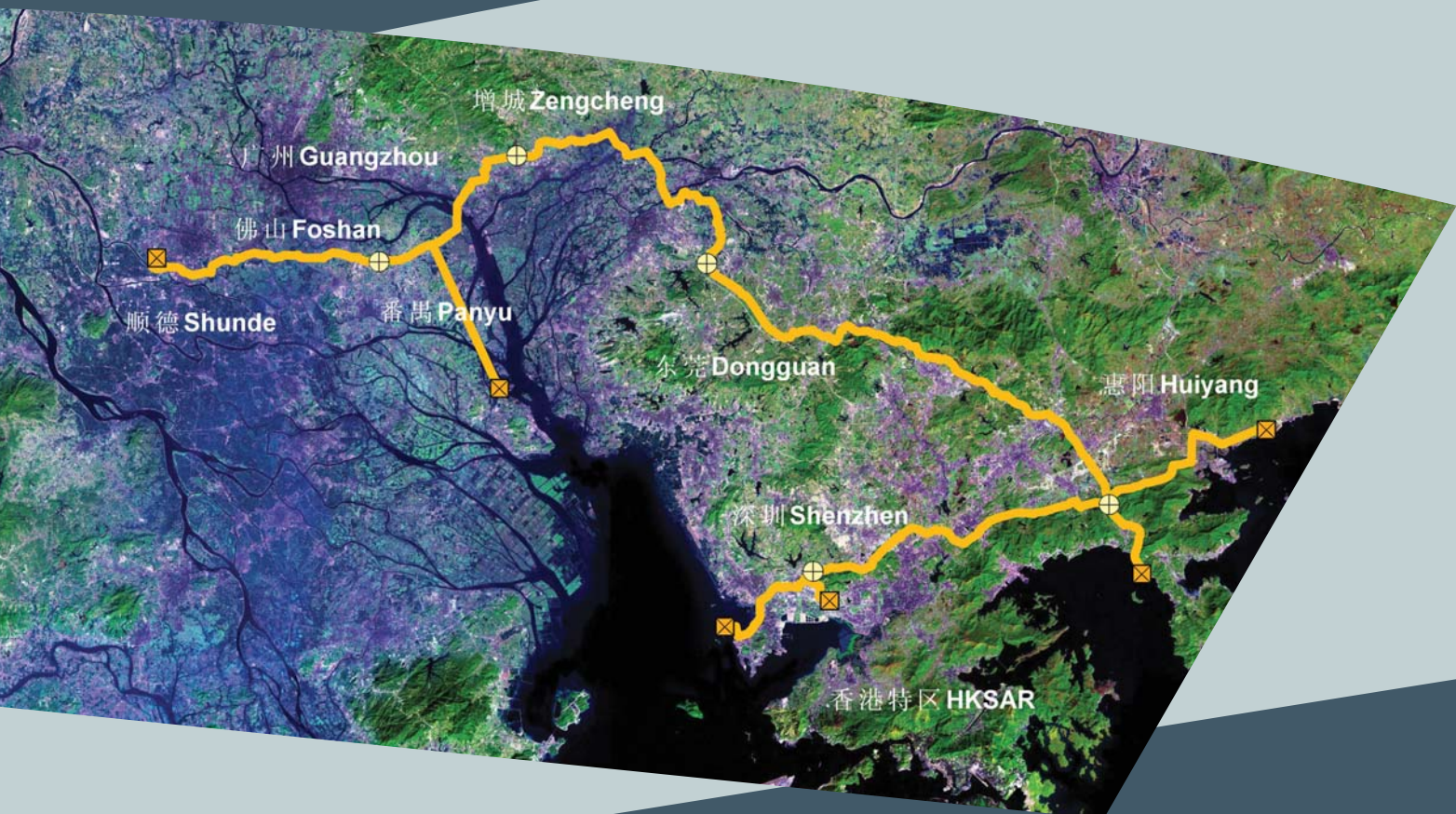


Guangdong LNG Terminal & Trunkline Project ESIA, PRC

INTRODUCTION

The project is the first of the planned initiatives to provide natural gas to the region and is also the first LNG Terminal to be established in China and includes a coastal terminal to receive, store, re-gasify and send-out natural gas delivered in liquid form by ocean-going tankers and more than 360 km of natural gas pipeline network leading to major population centers.

The purpose of the Project is to provide clean fuel to numerous power stations and the Hong Kong SAR via submarine pipelines that connect to the distribution areas. The project has resulted in a significant benefit to the region by reducing air pollutants and provides a reliable source of energy to cater to the development of the Pearl River Delta.



OUR SOLUTION

Atkins was appointed by the BP/CNOOC as the International Consultant for the ESIA Study to address both PRC and International standards and BP corporate expectations. The key requirements of the ESIA included:

- Satisfaction of PRC, JEO and International Environmental & Social Standards and Requirements.
- Contribution to Project Design by undertaking the ESIA in Parallel with the Project Design.
- Full Coverage Survey and Assessment of the Pipeline and LNG Terminal.
- Assessment Flexibility through Rapid Assessment Techniques.

OUR APPROACH

The Environmental and Social Impact Assessment (ESIA) was undertaken on the construction and operation of the project and included air quality, noise, ecology, water quality, social impacts, environmental risk and waste management. Quantification of the benefits of the project were also demonstrated in the ESIA, which show that the project will

reduce CO2 emissions of up to 30M tons per annum and significantly reduce other atmospheric pollutants such as NOx and SOx.

Atkins also undertook the quantitative risk assessment and geotechnical terrain hazard assessment for this project.

OUTCOMES

The ESIA was approved and verified by the State Environmental Protection Agency and the Guangdong Environmental Protection Bureau in 2003 on schedule with the project programme. Atkins was subsequently called upon to prepare the environmental tender document specifications for the pipeline construction, the environmental management system and on site environmental supervision of the terminal and detailed risk assessment report. Audits on the construction programme for the gas supplier were also undertaken by Atkins prior to terminal operation.