APEC Low Carbon Development Case Study

An Urban Low Carbon Development Strategy and Implementation Roadmap for the Special Economic Zone of Bitung, Indonesia

The Brief

Who is the client?

The Asia-Pacific Economic Cooperation (APEC) is a regional economic forum that was established in 1989 to leverage the growing interdependence of Asia-Pacific. APEC's 21 members aim to create greater prosperity for the people of the region by promoting inclusive, sustainable, innovative and secure growth, and by accelerating regional economic integration.

What is the context?

The APEC Low Carbon Model Town (LCMT) project aims to encourage the creation of low-carbon communities across the APEC region and to develop and share best practices among its members. Through a series of individual urban low-carbon projects in several member states, the LCMT initiative promotes the combined utilisation of renewable energy, energy-efficiency measures, and sustainable transport and waste systems to create communities that can combine pleasant living conditions with affordable energy and carbon emission reduction possibilities.

The low-carbon industrial greenfield project in Indonesia is the fifth of its kind (LCMT Phase 5), with previous projects focusing on urban low-carbon developments in different settings and locations. These have included a central business district in China, a tourism and resort area in Thailand, and a residential zone in Peru.

In light of APEC's activities, South Pole Group (SPG), as leader of a consortium consisting of Factor CO2, ICLEI and Ammari Consulting, submitted a winning proposal to develop the low-carbon development strategy and implementation roadmap for the SEZ Bitung as part of APEC's LCMT Phase 5.

What was the briefing?

To be considered a success, the LCMT project in Bitung was expected to deliver three main activities.

The first activity called for the development of a comprehensive LCDS that included a high-level sustainability vision; a green-house gas (GHG) baseline and Business-As-Usual (BAU) emission scenarios; GHG emission reduction and sustainable development targets; as well as the selection of high potential low-carbon measures in the energy, industrial, waste, commercial, residential, transportation, land use change and forestry sectors.

The second activity consisted of developing a detailed impact and cost analysis of the selected high potential low-carbon measures. Based on the analysis, the Consortium was expected to deliver a prioritised list of actions to be implemented in the SEZ Bitung.

The third and final project phase involved establishing a comprehensive implementation methodology and related action plans for the selected and prioritised low-carbon measures. These action plans and measures included recommendations on the institutional and regulatory framework, suggestions on the required financial architecture and a selection of dedicated national and international funding sources.

What was the challenge?

The work led by SPG was unprecedented in terms of its low-carbon development focus (i.e. industrial greenfield area), and in terms of its detail and practical implementation steps; the four previous LCMT phases carried out by APEC focused only on general feasibility assessments. SPG proposed very specific mitigation measures across a wide range of urban sectors that were justified through indepth analysis of their GHG emission reduction potential, sustainable development benefits, financial feasibility and cost effectiveness, as well as their political, legal, regulatory and technical feasibility.

As this ambitious output from SPG extended far beyond the original scope and expectations of APEC, the greatest challenge was to ensure compliance with time and budgetary constraints.
The positive outcome of extending the scope of work is that it allowed SPG to develop a unique set of tools and methodologies for urban climate change mitigation strategy assessment, design and implementation, solidifying its leadership role in the urban mitigation/ low-carbon cities space.

What solution did South Pole Group develop for APEC?

The work carried out by the SPGled consortium for APEC's LCMT project in Bitung resulted in:

1. a Low Carbon Development Strategy (LCDS) for the SEZ Bitung
2. a detailed impact and cost report on selected Low Carbon Measures (LCMs)
3. an Implementation Roadmap

These outcomes together ensured that, for the first time, an urban mitigation project delivered a comprehensive, detailed and actionable LCDS and implementation roadmap.

Benefits

This innovative LCDS was developed by adapting international best practices and real-world experiences in urban, low-carbon development to the local Indonesian context. This was achieved by incorporating the views and interests of civil society, academia and local communities into the design process.

The project results will allow Indonesian central and local government officials, in particular the Government of North Sulawesi, to make informed decisions and take action based on a comprehensive and practical low-carbon strategy. The set of actions proposed ensures that the government can curb GHG emissions associated with urban planning, and incentivise both public and private developers to take focused climate action.

In addition, the LCDS and proposed mitigation actions are fully aligned with the domestic policy and institutional landscape in Indonesia, as well as with local and national sustainable development objectives a prerequisite for the future implementation of the urban low-carbon strategy developed for the SEZ in Bitung and beyond.

Why work with us

Global team

We are a truly global provider of sustainability solutions and services. Our team is made up of over 130 skilled and enthusiastic professionals from over 20 different countries, based in offices spanning 6 continents.

Proven impact

Since 2006, we have measured the climate impact of countless companies, projects and products worldwide. We have screened USD 50 bn+ of investments for their climate impact and we have developed 270+ projects in renewables, energy efficiency, forestry, agriculture, industry and households. Through our efforts, 50 million tonnes of CO_2 have been saved, almost as much as the annual CO_2 emissions of Portugal. We have enabled the production of 35,000 GWh of renewable energy (more than the annual electricity consumption of Denmark), and mobilised over USD 6 bn for clean energy investments in emerging markets. We have protected or restored over 250,000 km^2 of land, about as much as the total land mass of the UK. In total, our projects have helped create almost 20,000 jobs in developing countries and we saved 17,000+ hectares of forest from deforestation, about the size of 24,000 soccer pitches.

Added value

We help you grow with groundbreaking solutions that benefit your business, the environment and society.

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