Case Study

3 x 80-m Chimney for Taiwan's LNG Transition

DATA AT A GLANCE

No. of chimneys	3
Chimney height	80 m
No. of internal steel flues	1 ea
No. of internal platforms	4 ea
Windshield concrete volume	1,500 m^3 ea
Pilecap concrete volume	2,550 m^3 ea
Diameter of internal flues	9 m
Concrete internal diameter	14.3 m

Precision Engineering

Completed to specification using slipform technology and engineered lifting systems for critical internal components.

Safety Leadership

Zero lost time injuries across the full scope of works, executed under strict safety controls in a high-traffic, multi-contractor site.

Environmental Integration

Supporting Taiwan's move toward cleaner, LNG-based power through design that blends performance with purpose.

Project Overview

As part of Taiwan's energy transition, the Hsinta Power Station is being redeveloped into a 3,900 MW LNG-fired facility, delivering cleaner base-load power to the national grid through three combined cycle units.

BEC was engaged to deliver three 80-meter reinforced concrete chimneys, each constructed using slipform technology and designed to support emissions compliance and operational reliability.

This project is part of BEC's growing portfolio of successful collaborations with CTCI and Taipower.

Challenges

- **Seismic and Typhoon Vulnerability:** Required complex structural design, reinforcement, and construction controls to mitigate extreme loading risks during and after construction.
- **Artwork Integration During Construction:** Coordinating the intricate wetland-inspired mural painting posed logistical and safety challenges. Maintaining smooth finishes and unobstructed access required active sequencing and problem-solving.
- **Constrained Worksite:** Material staging, crane access, and worker movement had to be precisely managed to avoid delays.

Slipforming progress

Sequential slipform construction of chimneys

Top-down mural application

Owner

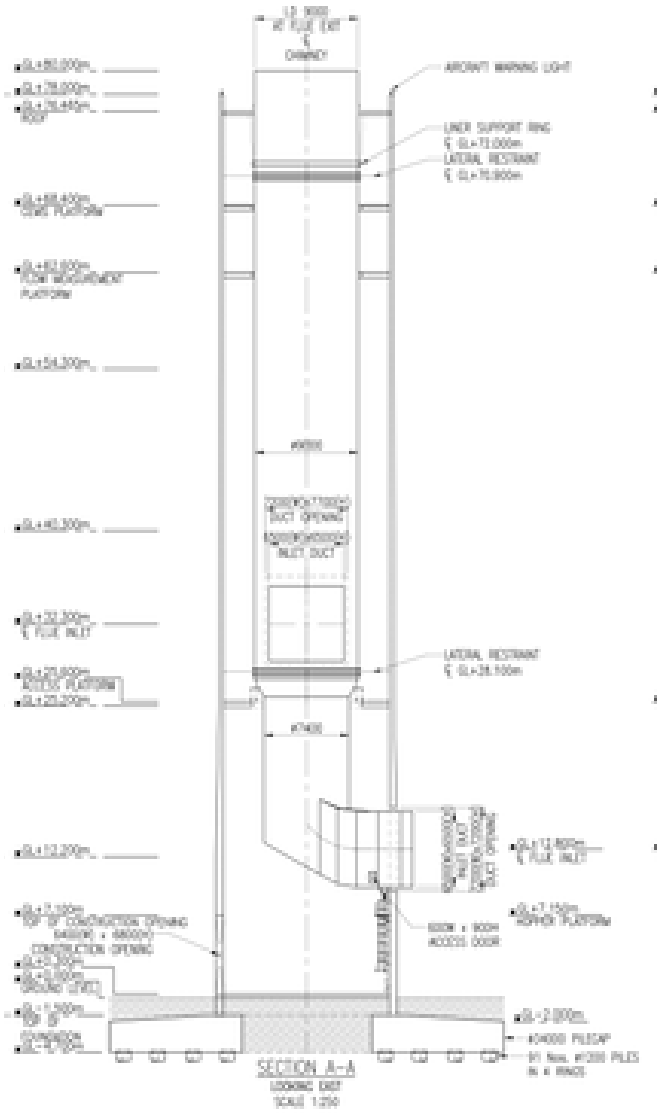
Taiwan Power Company (Taipower)

Client

CTCI

Completion Date

August, 2025



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Detail of Work by BEC

BEC delivered the chimney package for three 80-metre stacks at the Hsinta Combined Cycle Gas-Fired Power Plant, including civil, structural and mechanical works within a constrained, multi-contractor site.

Scope Highlights:

- Detailed design and engineering works
- Pile-cap construction
- Slipform construction of each 80m chimney
- Structural steelwork and staircase installation
- Liner can and beam lifting using hydraulic jacking systems
- Supply and installation of internal rack and pinion access hoist
- Windshield painting of large-scale wetland-themed mural
- Off-site steel fabrication and on-site integration

The BEC Advantage

BEC successfully delivered three 80-metre chimneys under high-stakes conditions, on time, with zero LTIs, and full compliance across structural, environmental, and safety standards. The chimneys now stand as critical emissions structures and visual landmarks for one of Taiwan's largest LNG power developments.

BEC's role in the Hsinta redevelopment underscores its trusted ability to deliver essential vertical structures in fast-paced, high-stakes environments, with safety, schedule, and compliance fully aligned.

Contact us to learn more about BEC's engineering solutions!

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