Sungei Kadut Eco-District

Punggol Digital District

DECAL 2.0 – Site Visit

10 Feb 2026

Agenda

1. Project Overview and Scope

2. Recap of Challenge Statement #5

3. Revenue House: Key Challenges Identified

4. Building Information

5. ACMV System in Revenue House

6. Energy Usage Analysis (6-Month Period)

7. Site Visit
   - Typical Office Plan

Project Overview and Scope

Clarifications

Please submit clarifications via this link or QR code.

https://go.gov.sg/decal2-clarification

Review Official Documents

Participants should review the Cover Letter, Information document, and IPI portal resources to understand requirements fully.

Prepare and Submit Proposals

Next steps include finalizing concepts, securing partnerships, and compiling documents to submit competitive proposals.

Recap of Challenge Statement #5

Energy Efficient Buildings –
Transforming existing building operations for a low-carbon future

Background

Operational energy use is hindered by fragmented systems, limited visibility, and the gap between technology and data-driven decisions. Occupant and operator behavior plays a critical role, but they lack actionable feedback.

Desired Outcomes

Achieve a 15-20% reduction in energy consumption from the existing baseline by:
- Using intelligent energy management and automation that adapts dynamically
- Engaging tenants and operators with intuitive tools and feedback
- Transparently measuring and verifying all energy and carbon reductions

Key Requirements
- TRL 7 or above
- Improve user behavior rather than be dependent on it
- Demonstrate applicability to existing buildings

Revenue House: Area of Concerns

Current Practice:

- Go25 Campaign – temperature range of 24–25 degrees Celsius

User Behavior:

- Feedback indicates warmth and stuffiness when temperature is maintained at 24–25 degrees Celsius

- Feedback indicates excessive coldness at lower temperatures

Desired Outcomes:
Achieve energy reduction whilst maintaining thermal comfort by:
- Engaging occupants and operators with intuitive tools and feedback
- Using intelligent energy management and automation that adapts dynamically
- Implementing cost-effective Measurement & Verification (M&V) solutions

Building Information

Inland Revenue Authority of Singapore (IRAS)
Revenue House

Key Function	• Office space to support IRAS operation on tax administration • Serving public users for tax administration and public revenue services
Operating Nature	• High daily human traffic during peak tax periods • Strong emphasis on queue management, system uptime, security, and user experience
Facilities	• Meeting rooms and Office holder rooms • Carpark (B2-B4) • B1 training rooms • L1 Atrium Staff Lounge, Taxpayer & Business Service Centre (TBSC) • L5 Clubhouse & Auditorium • Executive floor (Level 24) lounge, meeting and conference rooms
Total GFA	• 108,080 sqm
Size	• Number of Storey: 24 (Tower Block with 5 Storey Podium) plus main & aux tower roofs • Number of Basement: 4 • Tenant mix: Public agencies, L2 Canteen and Clinic, L5 Gym and Childcare
Address	Revenue House, 55 Newton Road, Singapore 307987

ACMV System in Revenue House

Chiller Plant System	**5 Units of Water Cooled Chillers** • 1 x 450 RT • 4 x 550 RT
	5 Units of Chilled Water Pump
	5 Units of Condenser Water Pump
	5 Units of Cooling Tower • 4 cell x 550 RT
Air Handling Unit (AHU)	**71 AHU and 167 FCU** • Typical floor consists of 2 AHU and 2 FCU applies to office block Note: Phase 1 - 31 AHU replacement will take place in FY2026

Energy Usage Analysis (6-Month Period)

Month	July 2025	August 2025	September 2025	October 2025	November 2025	December 2025
Total Consumption (kW)	929,452	856,053	834,132	873,453	845,588	857,663
Chiller Plant System (kW)	133,808	110,932	109,788	113,296	107,895	108,920
Air Handling Unit (AHU) (kW)	139,389	131,423	120,753	99,420	100,635	92,479
Data Centre (DC) (kW)	314,564	376,558	376,105	334,596	361,365	403,336
Others (e.g., lighting, power) (kW)	341,691	237,140	227,486	326,141	275,693	252,928

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Thank you.