



## EECA 2024 EnMS STARTER PACK

### C8 · ACTION PLAN & ESM REGISTER

# Action Plan & ESM Register

From audit findings to a costed, owned, measured programme — companion to the ESM Register (xlsx)

GP46 para. 6 requires an action plan built from the gap review, with technical strategies, timelines and estimated savings, financial prioritisation, and named roles and resources; para. 7 requires its implementation to be documented, non-conformance handled, and every ESM measured and verified against an M&V plan. This companion explains each field of the xlsx register and sets the operating rhythm.

| DOCUMENT NO. | REV | ISSUE DATE   | PREPARED BY      | APPROVED BY     |
|--------------|-----|--------------|------------------|-----------------|
| INV-ENMS-C8  | 1.0 | 29 July 2026 | Innovast Sdn Bhd | Anslem Lim, CEO |

Rev 1.0 · issued 29 July 2026 · regulatory sources last verified 18 July 2026.

**DRAFT FOR ADAPTATION** — this template is not regulatory advice. Prepared with reference to GP/ST/No.46/2024 (Guidelines on Energy Management System), the Energy Efficiency and Conservation Act 2024 [Act 861] and the Energy Efficiency and Conservation Regulations 2024 [P.U.(A) 466/2024]; sources last verified 18 July 2026. Adapt every field to your organisation before use. Only Suruhanjaya Tenaga can determine compliance with the Act.

#### Innovast Sdn Bhd

Licensed Energy Service Company (ESCO) · ESCO Reg. No. ESCO 327(2023)/76/2024  
Company Reg. No. 202201012221 (1457918-M) · Registered with Suruhanjaya Tenaga · SEDA Recognised  
[www.innovast.asia](http://www.innovast.asia) · [anslem@innovast.asia](mailto:anslem@innovast.asia) · +60 12 355 6214

## 1 Where the plan comes from (GP46 para. 6.0(a))

The action plan is not a wish list — it is the closure of a measured gap. Three inputs feed it:

- The EnMS self-evaluation and assessment findings (C10, C1) — organisational gaps: missing procedures, training, data, governance.
- Technical assessments and energy audit findings — the engineering opportunity list, with the registered energy auditor's savings estimates. The REM makes reference to the audit report's ESM list when proposing the action plan (GP47 para. 3(f)(i)).
- The gap between current performance and the targets set in C6 — the quantum the plan must close.

## 2 The register fields — and how to fill them

| Field (xlsx column)                 | What goes in it                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ESM ID / description                | One measure per row, described so a newcomer could find it on site. Category and type follow the GP45 classification (see Section 4) so the register maps straight into the EE&C report.                                                                                                                                              |
| Category / Type                     | Category: Operation, System or Equipment (GP45 para. 4.1.9.4). Type: chiller/ACMV, compressor, fan, lighting, motor, pump, boiler, thermal oil heater, furnace, heater, dryer, burner, heat exchanger, passive design, awareness programme, energy monitoring system, process, cogeneration/trigeneration, etc. (GP45 para. 4.1.9.5). |
| Status                              | Proposed → In Progress → Completed (or Rejected, with reason) — the GP45 List-of-ESM statuses, so annual reporting is a filter, not a rewrite.                                                                                                                                                                                        |
| Estimated savings (GJ/yr and RM/yr) | From the audit or engineering estimate; state the basis. Once implemented, the M&V result supersedes the estimate — keep both.                                                                                                                                                                                                        |
| Investment cost (RM)                | Capex + implementation cost. For no-cost operational measures enter 0 — they still carry savings and still get M&V.                                                                                                                                                                                                                   |
| SPP / NPV / IRR                     | SPP = investment ÷ yearly savings cost (GP45 Equation 3) — the register computes it. Add NPV/IRR for board-level measures; record the discount rate used.                                                                                                                                                                             |
| Owner / resources                   | A named person, internal or external (consultant, contractor, vendor), plus the cost and human-resource estimate — GP46 para. 6.0(c).                                                                                                                                                                                                 |
| Timeline                            | Start and completion dates. GP46 contemplates targets achievable within three years of establishment (para. 5.3.2) — sequence the plan accordingly.                                                                                                                                                                                   |
| M&V plan                            | Per ESM: the approach (e.g. IPMVP Option A/B/C/D), the measurement boundary, the baseline adjustment basis, and where the M&V records live. GP46 para. 7.6 requires the plan, the data and the savings analysis to be documented and archived.                                                                                        |
| Verified savings                    | The M&V result once measured — the number the management review and the EE&C report carry.                                                                                                                                                                                                                                            |

## 3 Operating rhythm

| Cadence | Action                                                                           |
|---------|----------------------------------------------------------------------------------|
| Monthly | Owners update status and progress notes; REM updates M&V data for completed ESMs |

| Cadence                        | Action                                                                                                                                                                                                                    |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Each Committee meeting (≥4/yr) | Review the register: slippage, blockers, savings vs estimate; approve new ESMs; record decisions in the minutes (C3)                                                                                                      |
| Non-conformance                | Where an implemented measure underperforms or a procedure is not followed, raise a corrective action row (register sheet 2) — GP46 para. 7.5 requires procedures for non-conformance and corrective and preventive action |
| Annually                       | Close the reporting year: Completed ESMs → the EE&C report Summary of Implemented ESM (C12); revise targets and re-prioritise — GP46 para. 4.3(b)(ix)                                                                     |

## 4 Design and procurement measures

GP46 embeds efficiency into the policy commitment on energy-efficient products in new projects, retrofitted and renovated facilities where economically feasible (para. 4.4.1(d)). Operationalise it with two standing rows in the register: (1) a design-review rule — energy performance is a stated criterion in every new project and renovation design review; (2) a procurement rule — energy-consuming equipment above RM[threshold] requires a lifecycle-energy comparison before purchase. Both rows carry an owner and get reviewed like any other ESM.

## 5 The M&V discipline — why it is not optional

Every ringgit of claimed savings that cannot be shown against a measured baseline is a credibility risk — with your board before it is with the Commission. GP46 para. 7.6 requires M&V per ESM; the EE&C report carries yearly savings figures per implemented measure (GP45 para. 4.1.9.3). The defensible way to produce those figures is a recognised protocol: Innovast delivers M&V to IPMVP as standard, selects the option (A/B/C/D) per measure, and archives the plan-data-analysis chain GP46 asks for.

**From register to guaranteed savings.** Where the register shows a deep retrofit worth doing, Innovast can structure it as an Energy Performance Contract — implementation financed from verified savings, performance risk on us, IPMVP M&V for the term. And InnoSense keeps the whole register measured continuously. [eeca2024.my](https://eeca2024.my) · [anslem@innovast.asia](mailto:anslem@innovast.asia)

## The complete Starter Pack

This document is one of thirteen working documents in the EECA 2024 EnMS Starter Pack — together they stand up an energy management system that follows GP/ST/No.46/2024 and the statutory duties of Act 861.

| Code      | Document                                                          | Use it to                                                                                                                                     |
|-----------|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| C0        | Pack Guide & Compliance Clock                                     | Orient the team; diarise the statutory deadlines                                                                                              |
| C1        | EECA EnMS Gap Assessment Checklist                                | Score your current position (Yes / Partial / No) against every GP46 element and statutory duty; get a readiness band                          |
| C2        | Energy Management Policy Template                                 | Draft the policy with the four GP46-mandatory commitments built in                                                                            |
| C3        | Committee & Governance Kit                                        | Appoint the management representative; constitute the Committee; run and minute the meetings and the annual management review                 |
| C4        | Legal & Obligations Register                                      | Hold every Act 861 / EECR duty with citation, deadline, penalty, owner and status — the legal-compliance evaluation GP46 para. 8.2(g) expects |
| C5        | REM Appointment Checklist                                         | Choose internal vs external appointment; respect the tiering and the caps; manage the three-year window                                       |
| C6        | EnPI / EEI Worksheet (sector-selectable)                          | Establish the baseline and indicator — SEC path for industry, BEI path for buildings                                                          |
| C7        | Energy Data Collection Plan + 12-Month Consumption Tracker (xlsx) | Plan and record the twelve months of consumption, generation and variable data GP46 requires                                                  |
| <b>C8</b> | <b>Action Plan &amp; ESM Register (docx + xlsx)</b>               | Turn audit findings into a prioritised, costed, owned action plan with M&V per ESM ( <a href="#">this document</a> )                          |
| C9        | Communication, Awareness & Training Plan                          | Discharge GP46 para. 7.7–7.9 — communication matrix, motivation strategy, training programme                                                  |
| C10       | EnMS Self-Evaluation Matrix (xlsx)                                | Run the GP46 para. 5.2.3(a) maturity self-evaluation at Committee formation and periodically after                                            |
| C11       | Work Procedure & Log Sheet Starters                               | Seed the operational controls — chiller plant and lighting examples to adapt                                                                  |
| C12       | EE&C Report Skeleton                                              | Assemble the annual report content in the GP45 structure before entering it in the Commission's online system                                 |

Get the complete pack, free: [eeca2024.my/enms-pack](https://eeca2024.my/enms-pack) · [anslem@innovast.asia](mailto:anslem@innovast.asia) · +60 12 355 6214