

Detailed Design Document

Title: RBC – Watchdog (Producers ran today?) v1.2 (CR016)

Prepared by: ChatGPT (GPT-5 Thinking)

Issue Date: 2025-11-05

Design Reference: CR016 – Cold-Day Planning via Adjusted Minimum Temperature; DR004a RBC Alignment to Daily Demand Model; DAI + RBC HLD v1.1 §5.2.1

Governance Mode: Protected Architecture Mode v5.9 • Two-Phase Code-Change Gate v2.2

Linked Change/Defect: CR016

1. Functional Overview

The RBC – Watchdog (Producers ran today?) v1.2 automation validates that all RBC producer automations have executed successfully during the current day. The system checks timestamp helpers for four learning domains: PV Daily, Evening Bias (16–22), Demand Daily, and Temperature (added per CR016). At 23:59 each day the Watchdog compares today's date to each domain's "last period" stamp. If any are missing, it writes an alert to the Logbook and notifies the user's Pixel 9 Pro device.

2. Entity Map

Role	Entity ID	Notes
PV Daily stamp	input_text.rbc_last_period_pv	Updated by PV Daily Bias Producer.
Evening Bias (16–22) stamp	input_text.rbc_last_period_evening_demand	Updated by RBC Evening Bias Producer.
Demand Daily stamp	input_text.rbc_last_period_demand_daily	Updated by RBC Demand Daily Bias Producer.
Temperature stamp (NEW)	input_text.rbc_last_period_temperature	Added in v1.2 per CR016 – Temperature Bias Producer.
Notification target	notify.mobile_app_pixel9pro	Sends mobile alert on failure.

3. Trigger Matrix

ID	Trigger	Time / Condition	Purpose
t_2359	Time	23:59:00	Nightly Watchdog check of all Producer stamps.

4. Logic Flow

1. Trigger @ 23:59.
2. Load today's date (today_key = now().date()).
3. Read each domain's stamp and compare to today_key.
4. Build list of any domains not updated today.
5. If list non-empty → log ALERT and notify Pixel 9 Pro.
6. If all domains stamped → log "all producers stamped OK."

5. Guards and Safety

- Helpers only; no inverter writes.
- Visual-Editor-safe syntax.
- Single trigger per day (23:59).
- Adds Temperature stamp check without affecting existing logic.
- Notification rate limited to once per execution.

6. Acceptance Test Matrix

- AT-1: All stamps match today → Logs "All producers stamped OK."
- AT-2: One or more missing → Alert lists missing domains and sends notification.
- AT-3: Temperature only missing → Alert includes "Temperature" domain.
- AT-4: Repeated run same day → Single alert only; no duplicate notifications.

7. Compliance Checklist

- Entity Name ↔ ID alignment verified.
- Visual-Editor-safe (actions / targets / data).
- Trigger id present.
- No inverter writes.
- Change reference CR016 (Temperature integration).
- All branches have defaults.

8. Change History

Version	Date	Author	Summary

v1.2	2025-11-05	ChatGPT (GPT-5)	Extended Watchdog scope to include Temperature producer stamp per CR016; no behaviour or timing change.
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