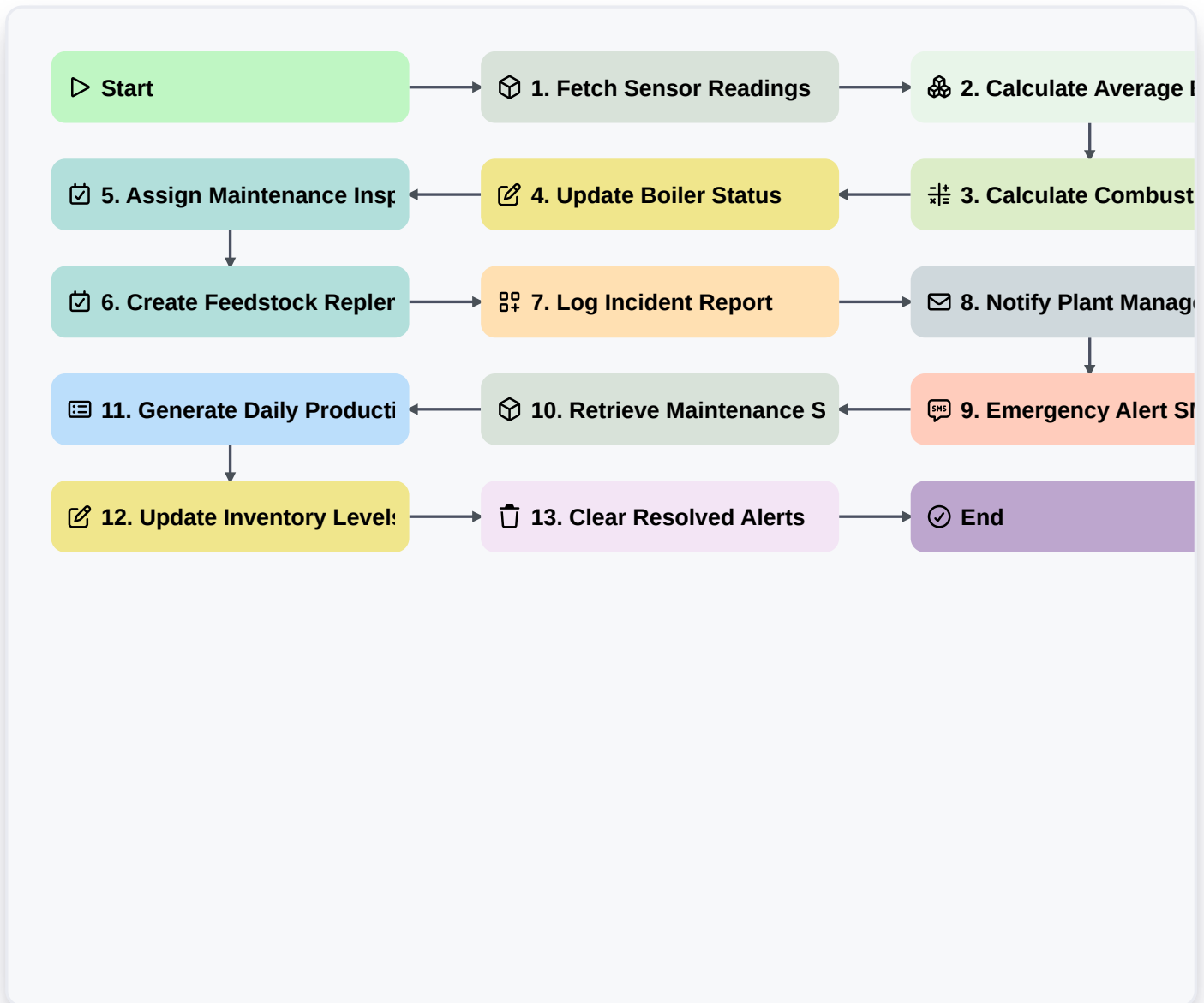


Biomass Power Plant Operations



▷ Start

Start of the Workflow/Process.

📦 1. Fetch Sensor Readings

Retrieve real-time temperature, pressure, and moisture level entries from the Biomass Feedstock and Boiler data models.

🔗 2. Calculate Average Biomass Moisture

Aggregate all recent feedstock entries to calculate the average moisture content percentage.

⚙️ 3. Calculate Combustion Efficiency

Execute a formula comparing heat output energy vs. biomass energy input based on retrieved sensor data.

📝 4. Update Boiler Status

Update the operational status (e.g., 'Warning', 'Optimal', 'Critical') in the Boiler Data Model based on calculation results.

📅 5. Assign Maintenance Inspection

Create a task for the Maintenance Engineer if sensor readings indicate temperatures are outside the safe operating range.



6. Create Feedstock Replenishment Task

Create a task for the Logistics Team when biomass inventory levels fall below the defined threshold.

7. Log Incident Report

Create a new entry in the 'Incident Log' data model when an anomaly is detected in the plant operation.

8. Notify Plant Manager

Send an automated email to the Plant Manager containing the summary of the efficiency calculation and current status.

9. Emergency Alert SMS

Send an urgent SMS to the On-Call Technician if the Boiler pressure exceeds critical safety limits.

10. Retrieve Maintenance Schedule

Get all upcoming scheduled maintenance entries from the Equipment Maintenance data model.

11. Generate Daily Production Report

Generate a comprehensive daily report summarizing total energy output, fuel consumption, and downtime from the day's task and entry data.

12. Update Inventory Levels

Update the 'Current Stock' value in the Biomass Inventory data model after a new shipment is logged.

13. Clear Resolved Alerts

Delete temporary alert entries from the 'Active Alerts' data model once the associated maintenance task is marked as complete.

End

End of the Workflow/Process.