JUPITER PRIME

Consulting • Training • Advisory

جوبيتر برايم للاستشارات والتدريب

COURSE BROCHURE

# Revenue Protection and Power Theft Detection Training Course

28 March – 1 April 2027
Abu Dhabi

**jupiterprime.uk**

info@jupiterprime.uk

Registered in the United Kingdom and Saudi Arabia

# Revenue Protection and Power Theft Detection Training Course

**Ref:** 3245_123550 **Date:** 28 March – 1 April 2027 **Location:** Abu Dhabi **Fees:** 6500 GBP

Revenue Protection and Power Theft Detection is a 1-week training course for metering, revenue assurance and loss reduction staff in electricity distribution, built around a revenue protection and loss recovery plan for one feeder or service area. Non-technical losses drain income, distort network planning and shift costs onto paying customers, so utilities now treat them as an operational discipline. Jupiter Prime Training sets revenue protection and power theft detection in its technical and commercial context.

## Why Revenue Protection and Power Theft Detection Matters Now

Smart meters now produce interval readings, tamper flags and event logs that expose suspicious consumption early. Customers expect fair, evidence-based treatment when a meter is questioned, and finance teams want trusted loss figures per feeder. Handled well, theft control recovers income and keeps disputes short; handled badly, it loses revenue and invites complaints. The course rests on energy balance accounting, meter accuracy testing practice and sound chain-of-custody principles for physical evidence.

## Who Gains Most from Revenue Protection and Power Theft Detection

- Revenue assurance analysts who reconcile billed energy against energy delivered to each feeder
- Metering engineers responsible for meter installation, sealing, testing and replacement
- Field inspection supervisors who plan site visits and direct disconnection crews
- Billing and customer account specialists who correct estimated or anomalous bills
- Loss reduction coordinators who set targets and report progress to network leadership

A distribution area sending its metering, billing and inspection leads together gains most.

## Revenue Protection and Power Theft Detection Capabilities

Participants learn to locate unbilled energy, prove its cause and recover it fairly.

- Calculate feeder and transformer energy balances to separate technical from non-technical losses — loss reduction targets
- Assess meter installations for bypass, magnet interference, reversed connections and broken seals — inspection crews
- Apply consumption profiling and anomaly scoring to rank accounts for site visits — revenue assurance leads
- Specify evidence capture, sealing and custody steps that withstand customer dispute — legal and customer services
- Design back-billing estimates and recovery terms that are consistent and defensible — billing managers
- Build a revenue protection and loss recovery plan with measurable feeder milestones — network leadership

## Key Revenue Protection and Power Theft Detection Terms

- Non-technical loss — energy delivered to customers but never billed, through theft, meter faults or unregistered connections.
- Energy balance audit — comparison of energy entering a feeder or transformer with the energy billed to its customers.
- Meter bypass — a wiring change that routes current around the meter so consumption goes unrecorded.
- Tamper event — a flag a smart meter records when its cover opens, a magnet is applied or current flows in reverse.
- Back-billing — recovery of the value of unrecorded consumption for the period an irregularity lasted.
- Chain of custody — the signed record of who handled a seized meter or seal, from site to test bench.

## Revenue Protection and Power Theft Detection Day by Day

### Day 1: Where Unbilled Energy Escapes

- Loss Categories and Their Sources — Targeting Effort Between Technical and Commercial Losses
- Feeder Energy Balance Calculations — Ranking Feeders by Unexplained Loss
- Distribution Transformer Metering — Narrowing Losses to a Single Supply Point
- Customer Segment Loss Patterns — Choosing Between Residential, Commercial and Industrial Focus
- Revenue Impact Estimation — Setting Annual Recovery Ambition

### Day 2: Meter Tampering and Illegal Connections

- Electromechanical and Static Meter Tampering Methods — Selecting Inspection Checks per Meter Type
- Bypass and Direct Hooking Signatures — Recognising Illegal Connections on Overhead Lines
- Seal Management and Meter Box Security — Deciding Where Hardening Pays Back
- Current Transformer Metering Irregularities — Protecting High-Value Industrial Accounts
- Portable Reference Meter Testing — Confirming Meter Error on Site

### Day 3: Analytics for Theft Detection

- Smart Meter Tamper Flags and Event Logs — Prioritising Alerts Worth a Visit
- Consumption Profiling and Sudden Drop Analysis — Spotting Accounts That Changed Behaviour
- Peer Group Comparison Models — Flagging Customers Far Below Similar Premises
- Billing Anomaly Rules — Catching Zero Reads, Estimates and Unregistered Supplies
- Hit Rate Tracking — Tuning Scoring Rules From Inspection Outcomes

## Day 4: Field Inspection, Evidence and Recovery

- Inspection Route Planning and Crew Safety — Balancing Coverage Against Field Risk
- Photographic and Physical Evidence Capture — Building a Case That Withstands Dispute
- Meter Seizure and Chain of Custody — Keeping Evidence Admissible From Site to Bench
- Back-Billing Estimation Methods — Choosing a Fair Basis for Unrecorded Consumption
- Customer Interview and Settlement Terms — Recovering Revenue While Limiting Complaints

## Day 5: Practising the Revenue Protection and Loss Recovery Plan

- Feeder Balance Case Study — Applying Loss Calculations to a Sample Network
- Anomaly List Triage Exercise — Applying Scoring Rules to Pick Inspection Targets
- Mock Site Inspection Debrief — Applying Evidence Steps to a Disputed Meter
- Loss Reduction Key Performance Indicators — Reporting Recovered Energy and Repeat Offences
- Revenue Protection and Loss Recovery Plan — Committing Feeder Milestones and Owners

## Applying Revenue Protection and Power Theft Detection After the Course

- Run an energy balance audit on the three feeders with the highest unexplained loss.
- Test a set of anomaly scoring rules against the last quarter of inspection results and retire weak rules.

## Revenue Protection and Power Theft Detection Questions FAQ

### What is revenue protection and power theft detection, and why does it matter now?

It is the work of finding, proving and recovering electricity used but never billed. Smart meter data now makes theft easier to detect and prove.

### Which roles gain most from revenue protection and power theft detection training?

Revenue assurance analysts, metering engineers, inspection supervisors, billing specialists and loss reduction coordinators gain most.

### How does revenue protection and power theft detection differ from a metering technology course?

It focuses on losses and recovery rather than meter design. A metering technology course explains how meters work; this one uses their readings and flags to find theft.

## What do you bring back from revenue protection and power theft detection training?

You bring back a recovery plan for a real feeder or service area. It lists target feeders, inspection rules, evidence steps and monthly indicators.

## Revenue Protection and Power Theft Detection: The Way Forward

The revenue protection and loss recovery plan first informs which feeders receive inspection crews and transformer metering in the coming quarter. Revenue assurance, metering and billing leads share it as one case basis. After its first cycle, revisit the scoring rules, since theft methods shift once known patterns close.