Transformer APM Pilot RFP Checklist

A practical checklist for utilities, TSOs, DSOs, generation owners, data centers, oil and gas, and industrial power teams evaluating a local-first, human-reviewed GridAPM pilot.

Use this with a controlled GridAPM pilot request. Keep AI draft output human-reviewed before it becomes reportable.

1. Pilot scope and success criteria

[ ] Define the transformer population, voltage class, owner, operating region, and first review workflow.

[ ] Name the first business problem: evidence assembly, CBM review, maintenance-window package, data contract, governance review, or evidence pack.

[ ] Define success measures: preparation time, evidence completeness, reviewer confidence, missing-evidence count, source traceability, or work-package quality.

[ ] State that the pilot does not measure guaranteed ROI, failure prevention, autonomous decisions, or final diagnostic authority.

2. Evidence and data readiness

Evidence area	RFP question	Owner / notes
DGA and oil	Which approved DGA and oil quality records can be used, with dates, units, lab context, and asset identity?	[ ]
PRPD and PD	Are partial-discharge records available with measurement conditions, instrument context, and reviewer notes?	[ ]
SFRA / electrical	Are SFRA or other electrical tests available with baseline comparison and test metadata?	[ ]
Thermal / loading	Can load, temperature, cooling, duty-cycle, and outage context be reviewed?	[ ]
Maintenance history	Can work orders, closeout notes, inspections, unresolved actions, and spares context be linked?	[ ]
Provenance	Which system is authoritative for each source, timestamp, unit, and approval state?	[ ]

3. Security, deployment, and data handling

[ ] Ask whether the pilot can run local-first or offline using approved historical evidence before live integration is considered.

[ ] Define whether asset identifiers, feeder records, customer names, event files, and work-order exports may be used.

[ ] Require a data-handling summary covering retention, export, reviewer access, model-output handling, and deletion expectations.

[ ] Require a statement of prohibited actions: no autonomous control, no switching, no protection setting changes, no automatic work-order approval.

4. Human-reviewed AI governance

[ ] Name reviewer roles for asset engineering, maintenance, operations, protection, security, procurement, and data governance.

[ ] Require draft, edited, rejected, approved, and escalated states for AI-assisted recommendations.

[ ] Require links from AI draft output to approved evidence, missing-evidence notes, assumptions, and reviewer comments.

[ ] Require audit records for source material, draft rationale, human edits, approvals, and final exported pack.

5. Required pilot deliverables

[ ] Pilot evidence inventory and missing-evidence list.

[ ] Source provenance table with owner, system, timestamp, units, and sensitivity notes.

[ ] Human-reviewed AI draft rationale with assumptions and reviewer edits.

[ ] Evidence pack or work-package template for internal review.

[ ] Pilot measurement scorecard covering preparation effort, traceability, and work-package quality.

[ ] Next-step plan for integration, security review, or production readiness assessment if the pilot is successful.

Boundary and disclaimer

This checklist is a business planning aid for transformer APM pilot procurement. It is not legal advice, procurement advice, cybersecurity assessment, compliance certification, engineering diagnosis, maintenance approval, operating instruction, or final transformer condition authority. GridAPM public materials should be reviewed by the customer's qualified engineering, OT, security, legal, and procurement teams before use in a formal request.

Recommended official references

NIST AI Risk Management Framework: https://www.nist.gov/itl/ai-risk-management-framework

NIST Cybersecurity Framework 2.0: https://www.nist.gov/cyberframework

NIST SP 800-82 Rev. 3 Guide to Operational Technology Security: https://csrc.nist.gov/pubs/sp/800/82/r3/final

IEEE C57.104 DGA guide source page: https://standards.ieee.org/ieee/C57.104/7476/

IEC 60599 source page: https://webstore.iec.ch/en/publication/23323

ISA/IEC 62443 series overview: https://www.isa.org/standards-and-publications/isa-standards/isa-iec-62443-series-of-standards