Quantum-Safe Energy and Utilities Intensive

Practitioner intensive

A full-day workshop for electric, gas, and water utilities planning a PQC migration around outages. Leave with an asset triage and a year-one plan.

Duration	Level	Fee
8 hours	**Practitioner**	**US$1,199 live online**
Planning workshop	No cryptography background needed	US$1,599 in person

Utilities schedule control-system changes in a post-quantum cryptography (PQC) migration around planned outages and maintenance windows, which can be 12 to 18 months apart. The relays, remote terminal units, and meters you buy this year may still be in service after 2035. Vendors built much of the cryptography in that equipment, and often only the vendor or an integrator can change it. In this workshop, you build a migration program around your outage calendar, your installed base, and your next purchases.

What you will build

- An estate map from corporate IT to the meter, showing who can change each part
- A program charter and steering committee structure
- An inventory plan and a cryptographic ownership register
- An initial priority list and asset triage, with evidence gaps recorded
- A vendor dependency register that separates evidenced dates from assumptions, and draft tender requirements
- An external dependency map for regulators, standards bodies, and interconnected operators
- A workstream and wave structure mapped to your outage calendar, with role and resource assumptions
- A year-one plan by quarter, with board KPIs and the decisions you need from others

Who should attend

- Program managers and PMO leads
- The CISO and chief engineer who will sponsor the program
- Utility security architects
- OT and control systems engineering leads
- Protection engineers
- Smart grid and AMI owners
- Procurement, process safety, and NERC CIP compliance staff

Electric, gas, and water utilities can attend together, even where their regulators differ. We recommend sending a mixed group from one utility, ideally the people who would be members of its quantum readiness steering committee. Bring at least one person from the team that owns the outage calendar. Many of the sequencing decisions in this workshop are outage planning decisions.

Preparation

We recommend Quantum-Safe Energy and Utilities as preparation, though you can enroll without it. It covers the same ground at overview depth. You can work through the day with data from your own organization or with a sample utility we provide.

Why Quantum Academy

This intensive is built on the OT & Critical Infrastructure Extension of the Applied Quantum PQC Migration Framework, published openly under Creative Commons at pqcframework.org. The course author wrote the framework and has led quantum readiness programs for critical infrastructure operators. The instructors run migration programs in this sector and teach the constraints they meet in that work.

Curriculum and enrollment

The day

The instructor starts each module with a short briefing. You then apply the module's template to your own estate or to the sample utility. In person, we teach the intensive from 09:00 to 17:00 local time, with lunch and two breaks:

09:00–09:50 · Module 1. From corporate IT to the meter
You map your own estate by domain and mark whether your IT team, your engineers, a vendor, or an integrator can change each part.

09:50–10:40 · Module 2. Mandate, governance, and the business case
You define a steering committee in which OT engineering and process safety have equal standing with IT security.

10:40–11:00 · Break

11:00–11:45 · Module 3. Inventory planning and ownership
You open a cryptographic ownership register first, so that every embedded credential and certificate store gets a named owner.

11:45–12:30 · Module 4. Risk scoring and asset triage
For equipment that cannot change in time, you keep its tier and choose enclosure behind a gateway, isolation, or a dated replacement.

12:30–13:30 · Lunch

13:30–14:20 · Module 5. Vendor management and the tender template
Your relay, RTU, and control-system vendors count as timeline-blocking. You grade every date a vendor gives you as committed, forecast, announced, or unknown, and draft agility-first tender requirements.

14:20–15:10 · Module 6. Regulators, standards bodies, and interconnected operators
You tag each regime that applies to you with its enforcement tier. You record the unpublished post-quantum revision of the IEC 62351 profiles as a substation dependency.

15:10–15:30 · Break

15:30–16:15 · Module 7. Outages, waves, and staffing
You map your planned outages and maintenance windows for the next 24 months. You then assign each change to the outage or maintenance window in which you will make it.

16:15–17:00 · Module 8. Year-one plan, KPIs, and the asks
You assemble the day's work into a year-one plan by quarter, from joint sponsorship and a first pilot at the IT/OT boundary to the first board report.

Live online, we teach it in two four-hour sessions on consecutive days, each with a short break. We cover Modules 1 to 4 in the first session and Modules 5 to 8 in the second.

Formats and fees

Format	Delivery	Fee
Live online	Two four-hour sessions on consecutive days	US$1,199
In person	One day, 09:00 to 17:00 local time	US$1,599
Private team training	Only your own colleagues attend	Quoted per engagement

What is included

- The course handbook, a PDF of the full material with the instructor notes written out
- A PDF copy of *Quantum Ready* by Marin Ivezic, the companion book to the framework the day draws on
- The working documents you build during the day, editable and yours to keep
- 180 days of access to the corresponding online on-demand course. Where that course is not yet published, the 180 days start on the day it is.
- A Quantum Academy certificate of completion. It confirms that you completed the course and is separate from Quantum Academy's professional certifications.

Explore the course

Dates and booking: quantumacademy.com/courses/quantum-safe-energy-utilities-intensive/



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Prices as of October 2026.

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