Energy Data Literacy and Production Reporting

GExperts Learning Academy | SC-X09 | SC | 1-3 days

Course overview

1-3 days SC programme focused on Energy Data Literacy and Production Reporting, using energy-sector cases and applied decisions.

Designed for: New entrants and cross-sector professionals

Learning outcomes

- Explain core principles and terminology for Energy Data Literacy and Production Reporting.
- Interpret an applied case using evidence and stated assumptions.
- Identify risks, safeguards, role boundaries and escalation points.
- Prepare a clear recommendation for a multidisciplinary audience.

Course guide

Work through each module objective, lesson and teaching note, complete the applied activity and assessment, then use the separate Academy practice page for practice questions and answer feedback.

Separate practice questions:
https://www.globalexpertsconsultoria.com/training/academy/courses/questions/?course=SC-X09

Academic and certification status

Draft learning resource for study and review. It does not confer accreditation, external certification, a regulated qualification, professional licence, safety-critical competence or site authorisation. Confirm approvals, current laws, standards, approved procedures and awarding-body requirements before delivery.

Module 1: Industrial data architecture and governance

Learning objectives

- Explain industrial data architecture and governance, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Industrial data architecture and governance
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Energy Data Literacy and Production Reporting

Detailed teaching notes

Teaching notes

Core explanation. Industrial data flows from sensors through historians and integration platforms to analysis and decisions. Define asset identity, units, timestamps, quality status and ownership. A large dataset is not necessarily fit for purpose.

Decision logic. Check time synchronisation, missing values, calibration changes and access permissions before analysis. Keep provenance and revision history. Avoid transferring confidential operational data into exercises; all datasets in this package are fictional.

Worked example. A trend combines pressure in bar and kilopascals under one label, producing a false step change.

Facilitator prompts. Ask learners to distinguish verified facts from assumptions, identify who has decision authority, name stop-work triggers and state what evidence could change their recommendation. Compare technical, HSE, commercial and community perspectives.

Activity. Create a data dictionary and quality checks for a fictional dataset.

Model answer guide. Define units, time basis, validity flags, owner and transformations; resolve inconsistent units before interpretation.

Assessment evidence. Score accuracy (30%), use of evidence (20%), safeguards (20%), analysis (20%) and communication (10%).

Applied activity

Create a data dictionary and quality checks for a fictional dataset.

Assessment

Formative: 10-question practice quiz with answer feedback

Summative: Applied decision brief or practical case assessed against the rubric; proposed pass mark 70%, subject to academic approval.

Practice

Use the separate Academy practice questions and answer key page for this module.

Module 2: Production forecasting

Learning objectives

- Explain production forecasting, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Production forecasting
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Energy Data Literacy and Production Reporting

Detailed teaching notes

Teaching notes

Core explanation. Forecasts combine reservoir behaviour, well availability, ramp-up, capacity constraints and downtime. Distinguish potential reservoir production from saleable output. State units, time basis and whether rates are instantaneous, daily averages or annual totals.

Decision logic. Build low, base and high cases with internally consistent constraints. Bottlenecks can shift as water production rises. Compare forecast to observed history when available and track revisions with reasons. Do not assign actual Namibian first-oil dates from classroom scenarios.

Worked example. A system with 100,000 barrels/day potential and 90% availability yields 90,000 barrels/day average before other constraints.

Facilitator prompts. Ask learners to distinguish verified facts from assumptions, identify who has decision authority, name stop-work triggers and state what evidence could change their recommendation. Compare technical, HSE, commercial and community perspectives.

Activity. Prepare a one-year forecast with availability falling to 80% for three months.

Model answer guide. Calculate period-weighted output and explain facility versus reservoir constraints separately.

Assessment evidence. Score accuracy (30%), use of evidence (20%), safeguards (20%), analysis (20%) and communication (10%).

Applied activity

Prepare a one-year forecast with availability falling to 80% for three months.

Assessment

Formative: 10-question practice quiz with answer feedback

Summative: Applied decision brief or practical case assessed against the rubric; proposed pass mark 70%, subject to academic approval.

Practice

Use the separate Academy practice questions and answer key page for this module.

Module 3: Energy Data Literacy and Production Reporting: Systems and Inter

Learning objectives

- Explain energy data literacy and production reporting: systems and interfaces, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Energy Data Literacy and Production Reporting: Systems and Interfaces
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Energy Data Literacy and Production Reporting

Detailed teaching notes

Teaching notes

Core explanation. Energy Data Literacy and Production Reporting: Systems and Interfaces describes a practical part of Energy Data Literacy and Production Reporting. Learners connect the principles to asset performance, people, operational risk, project value and local context.

Decision logic. Review the objective, evidence, limits, interfaces and applicable controls for energy data literacy and production reporting: systems and interfaces. Decisions require current information, role-appropriate authority, competent review and documented assumptions.

Worked example. Use an applied Namibia-relevant case in which a team plans energy data literacy and production reporting: systems and interfaces while balancing safety, integrity, schedule, cost, environmental protection and local capability.

Facilitator prompts. Ask learners to distinguish verified facts from assumptions, identify who has decision authority, name stop-work triggers and state what evidence could change their recommendation. Compare technical, HSE, commercial and community perspectives.

Activity. Prepare a decision brief for energy data literacy and production reporting: systems and interfaces: scope, evidence, assumptions, hazards, safeguards, owner, decision gate and escalation trigger.

Model answer guide. A sound response defines scope; uses current, traceable evidence; applies approved requirements and controls; records assumptions; assigns competent owners; checks interfaces; and communicates a measurable decision with an escalation path.

Assessment evidence. Score accuracy (30%), use of evidence (20%), safeguards (20%), analysis (20%) and communication (10%).

Applied activity

Prepare a decision brief for energy data literacy and production reporting: systems and interfaces: scope, evidence, assumptions, hazards, safeguards, owner, decision gate and escalation trigger.

Assessment

Formative: 10-question practice quiz with answer feedback

Summative: Applied decision brief or practical case assessed against the rubric; proposed pass mark 70%, subject to academic approval.

Practice

Use the separate Academy practice questions and answer key page for this module.

Module 4: NPV IRR and payback

Learning objectives

- Explain npv irr and payback, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of NPV IRR and payback
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Energy Data Literacy and Production Reporting

Detailed teaching notes

Teaching notes

Core explanation. Net present value discounts dated cash flows at a stated rate. Internal rate of return is a rate making NPV zero and may be ambiguous for unusual cash-flow patterns. Payback measures recovery timing and ignores some value effects.

Decision logic. Compare projects using consistent perspective, currency and risk assumptions. NPV scale and capital constraints matter; ranking by IRR alone can mislead. Real cash flows require a compatible real discount rate and nominal flows a compatible nominal rate.

Worked example. Minus 100 now and plus 121 after two years has zero NPV at 10% because 121 divided by 1.1 squared equals 100.

Facilitator prompts. Ask learners to distinguish verified facts from assumptions, identify who has decision authority, name stop-work triggers and state what evidence could change their recommendation. Compare technical, HSE, commercial and community perspectives.

Activity. Calculate NPV at 5% and explain why the result changes.

Model answer guide. NPV is about 9.75; a lower discount rate increases the present value of the future receipt.

Assessment evidence. Score accuracy (30%), use of evidence (20%), safeguards (20%), analysis (20%) and communication (10%).

Applied activity

Calculate NPV at 5% and explain why the result changes.

Assessment

Formative: 10-question practice quiz with answer feedback

Summative: Applied decision brief or practical case assessed against the rubric; proposed pass mark 70%, subject to academic approval.

Practice

Use the separate Academy practice questions and answer key page for this module.

Module 5: Petroleum policy and institutional governance

Learning objectives

- Explain petroleum policy and institutional governance, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Petroleum policy and institutional governance
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Energy Data Literacy and Production Reporting

Detailed teaching notes

Teaching notes

Core explanation. Policy sets objectives, institutions assign authority, and governance creates accountability for decisions and resources. Explain government, regulator and state enterprise roles conceptually without asserting an unverified current Namibian structure.

Decision logic. Separate commercial participation from regulatory judgement and manage conflicts transparently. Define decision rights, disclosure, assurance and challenge. A strong governance design includes implementation capacity and an audit trail, not just an organisation chart.

Worked example. A fictional institution both promotes investment and evaluates its own project compliance, creating a conflict to manage.

Facilitator prompts. Ask learners to distinguish verified facts from assumptions, identify who has decision authority, name stop-work triggers and state what evidence could change their recommendation. Compare technical, HSE, commercial and community perspectives.

Activity. Draft a responsibility matrix and conflict-management controls.

Model answer guide. Identify segregated decisions, independent review, declarations and public accountability where applicable.

Assessment evidence. Score accuracy (30%), use of evidence (20%), safeguards (20%), analysis (20%) and communication (10%).

Applied activity

Draft a responsibility matrix and conflict-management controls.

Assessment

Formative: 10-question practice quiz with answer feedback

Summative: Applied decision brief or practical case assessed against the rubric; proposed pass mark 70%, subject to academic approval.

Practice

Use the separate Academy practice questions and answer key page for this module.

Module 6: Energy Data Literacy and Production Reporting: Data and Perform

Learning objectives

- Explain energy data literacy and production reporting: data and performance, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Energy Data Literacy and Production Reporting: Data and Performance
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Energy Data Literacy and Production Reporting

Detailed teaching notes

Teaching notes

Core explanation. Energy Data Literacy and Production Reporting: Data and Performance describes a practical part of Energy Data Literacy and Production Reporting. Learners connect the principles to asset performance, people, operational risk, project value and local context.

Decision logic. Review the objective, evidence, limits, interfaces and applicable controls for energy data literacy and production reporting: data and performance. Decisions require current information, role-appropriate authority, competent review and documented assumptions.

Worked example. Use an applied Namibia-relevant case in which a team plans energy data literacy and production reporting: data and performance while balancing safety, integrity, schedule, cost, environmental protection and local capability.

Facilitator prompts. Ask learners to distinguish verified facts from assumptions, identify who has decision authority, name stop-work triggers and state what evidence could change their recommendation. Compare technical, HSE, commercial and community perspectives.

Activity. Prepare a decision brief for energy data literacy and production reporting: data and performance: scope, evidence, assumptions, hazards, safeguards, owner, decision gate and escalation trigger.

Model answer guide. A sound response defines scope; uses current, traceable evidence; applies approved requirements and controls; records assumptions; assigns competent owners; checks interfaces; and communicates a measurable decision with an escalation path.

Assessment evidence. Score accuracy (30%), use of evidence (20%), safeguards (20%), analysis (20%) and communication (10%).

Applied activity

Prepare a decision brief for energy data literacy and production reporting: data and performance: scope, evidence, assumptions, hazards, safeguards, owner, decision gate and escalation trigger.

Assessment

Formative: 10-question practice quiz with answer feedback

Summative: Applied decision brief or practical case assessed against the rubric; proposed pass mark 70%, subject to academic approval.

Practice

Use the separate Academy practice questions and answer key page for this module.

Module 7: Energy Data Literacy and Production Reporting: Applied Case

Learning objectives

- Explain energy data literacy and production reporting: applied case, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Energy Data Literacy and Production Reporting: Applied Case
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Energy Data Literacy and Production Reporting

Detailed teaching notes

Teaching notes

Core explanation. Energy Data Literacy and Production Reporting: Applied Case describes a practical part of Energy Data Literacy and Production Reporting. Learners connect the principles to asset performance, people, operational risk, project value and local context.

Decision logic. Review the objective, evidence, limits, interfaces and applicable controls for energy data literacy and production reporting: applied case. Decisions require current information, role-appropriate authority, competent review and documented assumptions.

Worked example. Use an applied Namibia-relevant case in which a team plans energy data literacy and production reporting: applied case while balancing safety, integrity, schedule, cost, environmental protection and local capability.

Facilitator prompts. Ask learners to distinguish verified facts from assumptions, identify who has decision authority, name stop-work triggers and state what evidence could change their recommendation. Compare technical, HSE, commercial and community perspectives.

Activity. Prepare a decision brief for energy data literacy and production reporting: applied case: scope, evidence, assumptions, hazards, safeguards, owner, decision gate and escalation trigger.

Model answer guide. A sound response defines scope; uses current, traceable evidence; applies approved requirements and controls; records assumptions; assigns competent owners; checks interfaces; and communicates a measurable decision with an escalation path.

Assessment evidence. Score accuracy (30%), use of evidence (20%), safeguards (20%), analysis (20%) and communication (10%).

Applied activity

Prepare a decision brief for energy data literacy and production reporting: applied case: scope, evidence, assumptions, hazards, safeguards, owner, decision gate and escalation trigger.

Assessment

Formative: 10-question practice quiz with answer feedback

Summative: Applied decision brief or practical case assessed against the rubric; proposed pass mark 70%, subject to academic approval.

Practice

Use the separate Academy practice questions and answer key page for this module.

Module 8: Energy Data Literacy and Production Reporting: Communication a

Learning objectives

- Explain energy data literacy and production reporting: communication and escalation, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Energy Data Literacy and Production Reporting: Communication and Escalation
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Energy Data Literacy and Production Reporting

Detailed teaching notes

Teaching notes

Core explanation. Energy Data Literacy and Production Reporting: Communication and Escalation describes a practical part of Energy Data Literacy and Production Reporting. Learners connect the principles to asset performance, people, operational risk, project value and local context.

Decision logic. Review the objective, evidence, limits, interfaces and applicable controls for energy data literacy and production reporting: communication and escalation. Decisions require current information, role-appropriate authority, competent review and documented assumptions.

Worked example. Use an applied Namibia-relevant case in which a team plans energy data literacy and production reporting: communication and escalation while balancing safety, integrity, schedule, cost, environmental protection and local capability.

Facilitator prompts. Ask learners to distinguish verified facts from assumptions, identify who has decision authority, name stop-work triggers and state what evidence could change their recommendation. Compare technical, HSE, commercial and community perspectives.

Activity. Prepare a decision brief for energy data literacy and production reporting: communication and escalation: scope, evidence, assumptions, hazards, safeguards, owner, decision gate and escalation trigger.

Model answer guide. A sound response defines scope; uses current, traceable evidence; applies approved requirements and controls; records assumptions; assigns competent owners; checks interfaces; and communicates a measurable decision with an escalation path.

Assessment evidence. Score accuracy (30%), use of evidence (20%), safeguards (20%), analysis (20%) and communication (10%).

Applied activity

Prepare a decision brief for energy data literacy and production reporting: communication and escalation: scope, evidence, assumptions, hazards, safeguards, owner, decision gate and escalation trigger.

Assessment

Formative: 10-question practice quiz with answer feedback

Summative: Applied decision brief or practical case assessed against the rubric; proposed pass mark 70%, subject to academic approval.

Practice

Use the separate Academy practice questions and answer key page for this module.

Module 9: Energy Data Literacy and Production Reporting: Knowledge Check

Learning objectives

- Explain energy data literacy and production reporting: knowledge check, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Energy Data Literacy and Production Reporting: Knowledge Check
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Energy Data Literacy and Production Reporting

Detailed teaching notes

Teaching notes

Core explanation. Energy Data Literacy and Production Reporting: Knowledge Check describes a practical part of Energy Data Literacy and Production Reporting. Learners connect the principles to asset performance, people, operational risk, project value and local context.

Decision logic. Review the objective, evidence, limits, interfaces and applicable controls for energy data literacy and production reporting: knowledge check. Decisions require current information, role-appropriate authority, competent review and documented assumptions.

Worked example. Use an applied Namibia-relevant case in which a team plans energy data literacy and production reporting: knowledge check while balancing safety, integrity, schedule, cost, environmental protection and local capability.

Facilitator prompts. Ask learners to distinguish verified facts from assumptions, identify who has decision authority, name stop-work triggers and state what evidence could change their recommendation. Compare technical, HSE, commercial and community perspectives.

Activity. Prepare a decision brief for energy data literacy and production reporting: knowledge check: scope, evidence, assumptions, hazards, safeguards, owner, decision gate and escalation trigger.

Model answer guide. A sound response defines scope; uses current, traceable evidence; applies approved requirements and controls; records assumptions; assigns competent owners; checks interfaces; and communicates a measurable decision with an escalation path.

Assessment evidence. Score accuracy (30%), use of evidence (20%), safeguards (20%), analysis (20%) and communication (10%).

Applied activity

Prepare a decision brief for energy data literacy and production reporting: knowledge check: scope, evidence, assumptions, hazards, safeguards, owner, decision gate and escalation trigger.

Assessment

Formative: 10-question practice quiz with answer feedback

Summative: Applied decision brief or practical case assessed against the rubric; proposed pass mark 70%, subject to academic approval.

Practice

Use the separate Academy practice questions and answer key page for this module.

Module 10: Energy Data Literacy and Production Reporting: Competence Rev

Learning objectives

- Explain energy data literacy and production reporting: competence review, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Energy Data Literacy and Production Reporting: Competence Review
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Energy Data Literacy and Production Reporting

Detailed teaching notes

Teaching notes

Core explanation. Energy Data Literacy and Production Reporting: Competence Review describes a practical part of Energy Data Literacy and Production Reporting. Learners connect the principles to asset performance, people, operational risk, project value and local context.

Decision logic. Review the objective, evidence, limits, interfaces and applicable controls for energy data literacy and production reporting: competence review. Decisions require current information, role-appropriate authority, competent review and documented assumptions.

Worked example. Use an applied Namibia-relevant case in which a team plans energy data literacy and production reporting: competence review while balancing safety, integrity, schedule, cost, environmental protection and local capability.

Facilitator prompts. Ask learners to distinguish verified facts from assumptions, identify who has decision authority, name stop-work triggers and state what evidence could change their recommendation. Compare technical, HSE, commercial and community perspectives.

Activity. Prepare a decision brief for energy data literacy and production reporting: competence review: scope, evidence, assumptions, hazards, safeguards, owner, decision gate and escalation trigger.

Model answer guide. A sound response defines scope; uses current, traceable evidence; applies approved requirements and controls; records assumptions; assigns competent owners; checks interfaces; and communicates a measurable decision with an escalation path.

Assessment evidence. Score accuracy (30%), use of evidence (20%), safeguards (20%), analysis (20%) and communication (10%).

Applied activity

Prepare a decision brief for energy data literacy and production reporting: competence review: scope, evidence, assumptions, hazards, safeguards, owner, decision gate and escalation trigger.

Assessment

Formative: 10-question practice quiz with answer feedback

Summative: Applied decision brief or practical case assessed against the rubric; proposed pass mark 70%, subject to academic approval.

Practice

Use the separate Academy practice questions and answer key page for this module.

Facilitator close-out and resources

Facilitator close-out

Record attendance, assessment evidence, learner support needs, incidents and improvement actions according to approved provider processes. Do not sign learners off for regulated or safety-critical work without the authorised assessment and certification route.

Resources and references

- Supplied GExperts/IUM reference materials; verify reuse rights and currentness.
- Current applicable Namibian legislation, standards and approved site procedures supplied by the provider.
- Case worksheet and instructor slides must be produced and reviewed before course release.