

Energy Competencies for Environmental Professionals



| Main Areas of Expertise |
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| Environmental Impact Assessments |
| Site Assessments |
| Sampling & Analytical Work |
| Sustainability |
| Communications & Stakeholder Management |
| Energy Management, Energy Efficiency and Renewable Energy |

| Technical Competencies | Importance |
|---|------------|
| Conducting Environmental and Social Impact Assessments | |
| Ensures that the impact assessment scope, criteria and conditions (geographic, environmental, economic, social, and cultural) are defined adequately. | Critical |
| Develops a project management plan for the impact assessment study. | Moderate |
| Determines if sufficient baseline data is available for the impact assessment study. | High |
| Reviews facility/development design or production/manufacturing processes as part of the environmental and social impact assessment. | Critical |
| Consults with stakeholders to gather information regarding the perceived impacts of development activities on communities, the environment and natural resources. | Critical |
| Identifies which areas are likely to be significantly impacted by development activities, e.g. biophysical, economic, social, cultural, and heritage resources. | Critical |
| Assesses environmental and/or social issues, risks or problems, including their cumulative effect and corresponding economic, social and cultural impacts. | High |

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| Technical Competencies | Importance |
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| Conducting Environmental Site Assessments (ESA - Phase 1 and Phase 2) | |
| Carries out visual inspection of the site and neighbouring properties as part of the impact assessment. | Moderate |
| Interpreting/Enforcing/Complying with Environmental Regulations and Standards | |
| Provides advice and/or testimony to senior management, internal staff, regulatory bodies, interest groups and the public regarding environmental regulations and environmental or sustainability standards issues. | High |
| Applies environmental legislation regarding issues such as contaminated sites, hazardous materials and waste, pesticide use, storage tanks, etc. to specific applications as appropriate. | Moderate |
| Develops plans and programs to meet environmental regulatory requirements and/or environmental and sustainability standards. | Critical |
| Implements programs, including monitoring activities, to ensure regulatory compliance and standards conformance. | Critical |
| Evaluates compliance with environmental regulations and conformance to environmental and sustainability standards. | Moderate |
| Prepares compliance and regulatory reports for internal use and for filing with regulatory or reporting agencies. | Moderate |
| Oversees or participates in audits of environmental and/or sustainability performance to determine adequacy of procedures and non-compliance/conformance issues. | High |
| Developing Environmental Sampling, Testing and Monitoring Programs | |
| Determines the need and scope for sampling programs, including environmental indicators, chemicals of concern, and sampling constraints | High |
| Develops methodologies and protocols for the collection and analysis of qualitative data to complement any quantitative data collected. | High |

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| Technical Competencies | Importance |
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| Collecting Samples and Data for Environmental Purposes | |
| Maintains appropriate records and ongoing documentation regarding field and laboratory analytical work, including regulatory documentation. | High |
| Analyzing and Interpreting Environmental Samples and Data | |
| Prepares summary reports of analysis results to be added into technical reports or presentations for expert and/or non-expert audiences. | Critical |
| Liaising and Partnering with Stakeholders | |
| Develops partnerships with key stakeholders to enhance environmental stewardship and address sustainability issues and concerns. | High |
| Developing Sustainability Strategies, Programs, Plans and Indicators | |
| Develops a framework and policies, with input from key stakeholders, for identifying sustainable development approaches and solutions that balance environmental, economic, social and cultural needs. | High |
| Identifies and addresses gaps in the scientific, technical and cultural knowledge needed for forecasting/modeling sustainable development scenarios. | Critical |
| Identifies and stays current with trends, best management practices, technology advancements, and guiding principles for sustainability. | Critical |
| Provides advice on the development of sustainability strategies, plans, programs or initiatives. | High |
| Evaluates the environmental, economic, social and cultural implications of potential sustainability initiatives. | High |
| Develops sustainability indicators and a process for reporting progress towards environmental performance targets. | High |

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| Technical Competencies | Importance |
|--|------------|
| Implementing/Monitoring Sustainability Strategies, Plans and Programs | |
| Implements sustainable development strategies. | Moderate |
| Monitors changing needs of stakeholders and effectiveness of sustainable development strategies over time to determine if strategies, targets, and/or timelines need to be modified. | High |
| Developing/Implementing Environmental and/or Sustainability Communications and Awareness Programs | |
| Demonstrates a working knowledge of environmental legislation, regulation, standards and voluntary agreements. | Moderate |
| Makes presentations to a variety of audiences to build awareness of environmental and/or sustainability issues, concerns and/or programs. | High |
| Presenting Expert Information on Environmental Matters | |
| Manages customer relations on environmental and/or sustainability matters that build productive partnerships with clients, suppliers, and other stakeholders. | High |
| Creating, Managing and/or Implementing Energy Management and Energy Efficiency Strategies, Initiatives, Projects and Programs | |
| Understands concepts related to generation, transport, installation, operation, and maintenance of technologies and related equipment used to produce energy. | Moderate |
| Provides advice on the development of energy management strategies for renewable energy use, reduction of GHG emissions or improved energy efficiency. | Moderate |
| Assesses the economic feasibility of products and technologies aimed at reducing energy demand and use and/or improving energy efficiency. | Moderate |
| Identifies targets, best practices and objectives to reduce energy demand or use and/or improve energy efficiency. | High |

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| Technical Competencies | Importance |
|---|------------|
| Develops or participates in plans, initiatives, projects or programs to reduce energy demand or use and/or improve energy efficiency. | High |
| Implements plans, initiatives, programs, projects or activities to reduce energy demand or use and/or improve energy efficiency | High |
| Monitors and/or reports performance of energy management plans, initiatives, programs, projects or activities aimed at reducing energy demand or energy use and/or improving energy efficiency. | High |
| Develops or participates in plans, initiatives, projects or programs to increase use of renewable energy or reduce greenhouse gas emissions and meet production or building operation needs. | Moderate |
| Managing and/or Implementing Renewable Energy-Related Strategies, Initiatives, Projects and Programs | |
| Implements energy management activities aimed at the use of renewable energy or reduction of greenhouse gas emissions to meet production or building operation needs. | Moderate |
| Monitors performance of energy management plans, initiatives, programs, projects or activities for the use of renewable energy or reducing greenhouse gas emissions while meeting production or building operation needs. | Moderate |
| Provides advice about energy consumption and greenhouse gas emissions that conform to standard protocols, legislated requirements and/or industry best practices. | Moderate |