Scenario 3

Prepare a fully costed contract bid scenario for the design, build implementation of a new build 25 MW On-Shore Wind 15 year ‘power purchase agreement’ based in Wales, with a minimum contracted capacity of 95% and CPi used to measure price inflation.

Fully Costed Contract Bid Scenario: 25 MW Onshore Wind Power Purchase Agreement (PPA) in Wales

Overview

This contract bid scenario outlines the requirements for the design, build, and implementation of a 25 MW onshore wind power project in Wales. The project will operate under a 15-year Power Purchase Agreement (PPA) with a minimum contracted capacity factor of 95%. The Consumer Price Index (CPI) will be used to measure price inflation for the PPA pricing adjustments.

Project Description

        •       Project Name: 25 MW Onshore Wind Power Project
        •       Location: Wales, United Kingdom
        •       Capacity: 25 MW
        •       Contract Duration: 15 years (PPA)
        •       Minimum Contracted Capacity: 95%
        •       PPA Price Adjustment: Linked to Consumer Price Index (CPI)
        •       Bid Submission Deadline: [Specify the date]
        •       Contact Information: [Contact details for bid submission and inquiries]

Scope of Work

        1.      Design Phase:
        •       Site assessment and wind resource analysis.
        •       Design wind farm layout and select turbine models.
        •       Obtain necessary permits and approvals.
        •       Develop grid connection and electrical infrastructure plans.
        2.      Build Phase:
        •       Procure and install wind turbines, foundations, and other infrastructure.
        •       Construct access roads, substations, and other civil works.
        •       Establish grid interconnection and conduct system integration.
        •       Commissioning and performance testing.
        3.      Implementation Phase:
        •       Operation and maintenance (O&M) of the wind farm.
        •       Monitor energy generation and ensure compliance with the 95% capacity factor.
        •       Provide regular maintenance and repair services.
        •       Adhere to environmental and safety regulations.

Cost Breakdown

        1.      Design Phase Costs:
        •       Site Assessment and Wind Resource Analysis: £450,000
        •       Design and Engineering: £1,200,000
        •       Permitting and Legal Fees: £400,000
        •       Grid Connection Planning: £300,000
        •       Total Design Phase Costs: £2,350,000
        2.      Build Phase Costs:
        •       Wind Turbines: £1,250,000 per MW x 25 MW = £31,250,000
        •       Turbine Transport and Installation: £4,000,000
        •       Electrical Infrastructure (Substations, Cables): £5,000,000
        •       Access Roads and Civil Works: £2,500,000
        •       Grid Interconnection: £1,500,000
        •       Commissioning and Testing: £600,000
        •       Total Build Phase Costs: £44,850,000
        3.      Implementation Phase Costs (15 years):
        •       Operation and Maintenance (O&M) Annual Cost: £1,250,000
        •       Total O&M Cost for 15 Years: £1,250,000 x 15 = £18,750,000
        4.      Financing Costs:
        •       Interest During Construction: £2,000,000
        •       Debt Service Costs: £2,500,000
        •       Total Financing Costs: £4,500,000
        5.      Contingency:
        •       Design and Build Contingency (10%): £4,720,000
        6.      Total Project Cost:
        •       Sum of All Costs: £2,350,000 (Design) + £44,850,000 (Build) + £18,750,000 (O&M) + £4,500,000 (Financing) + £4,720,000 (Contingency)
        •       Total Project Cost: £75,170,000

Financial Proposal

        •       Proposed PPA Price: £ XXXXX MWh (base price, to be adjusted annually based on CPI)
        •       Annual Energy Production Estimate: 25 MW x 24 hours/day x 365 days/year x 0.35 (capacity factor) x 0.95 (minimum capacity factor) = 72,867 MWh/year
        •       Annual Revenue: 72,867 MWh/year x £78/MWh = £5,686,626/year
        •       15-Year Revenue (Base Price): £5,686,626/year x 15 years = £85,299,390 (excluding CPI adjustments)
        •       Return on Investment (ROI) and Payback Period: Detailed in financial projections with CPI adjustments considered.

Bid Requirements

        1.      Technical Proposal:
        •       Detailed project plan and timeline.
        •       Wind resource assessment and expected energy yield.
        •       Design specifications and technology used.
        •       Engineering, procurement, and construction (EPC) plan.
        •       Operation and maintenance (O&M) strategy, ensuring compliance with the 95% capacity factor.
        2.      Financial Proposal:
        •       Total project cost breakdown (design, construction, operation).
        •       Proposed PPA price per MWh and adjustment mechanism based on CPI.
        •       Financing plan and sources of funding.
        •       Expected return on investment (ROI) and payback period.
        3.      Experience and Qualifications:
        •       Company profile and relevant experience.
        •       Examples of similar completed projects.
        •       Resumes of key personnel.
        •       Partnerships with turbine manufacturers and other subcontractors.
        4.      Compliance and Risk Management:
        •       Plan for obtaining permits and regulatory approvals.
        •       Environmental impact assessment and mitigation measures.
        •       Risk management strategy.
        •       Health and safety plan.

Evaluation Criteria

        •       Technical Feasibility: Quality and robustness of the technical proposal.
        •       Financial Viability: Cost-effectiveness, financial stability, and adaptability to CPI fluctuations.
        •       Experience and Expertise: Proven track record in similar projects.
        •       Compliance and Risk Management: Adherence to regulations and risk mitigation.
        •       Innovative Solutions: Use of advanced technology and innovative approaches.

Submission Instructions

        •       Submit proposals electronically via [submission platform/email] by [deadline date].
        •       Include all required documents and supporting materials.
        •       Proposals must be in PDF format, clearly labeled with the bidder’s name and project title.

Contact for Questions

        •       Name: [Contact Person]
        •       Phone: [Contact Number]
        •       Email: [Contact Email]

Key Dates

        •       RFP Release Date: [Release Date]
        •       Bid Submission Deadline: [Deadline Date]
        •       Evaluation Period: [Evaluation Start Date] to [Evaluation End Date]
        •       Award Notification: [Award Notification Date]
        •       Project Start Date: [Project Start Date]

This scenario provides a comprehensive outline and cost breakdown for bidders preparing proposals for the design, build, and implementation of a 25 MW onshore wind power project in Wales. The PPA terms, including the minimum contracted capacity and CPI-based pricing adjustments, are critical components for bidders to address in their financial and technical proposals.