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| **Assignment name:**  **Colombia Biomass Power Plant Pre-Feasibility** | **Approx. value of the contract (in current US$):**  **53,400** |
| **Country**: Colombia | **Duration of assignment (months)**: 2 |
| **Name of Client**:  Confidential | **Total No. of staff-months of the assignment**:  1.0 |
| **Contact Person, Title/Designation, Tel.**  **No./Address**:  Confidential | **Name**:  **Title**:  **Address**:  **Tel**: T:  **Email**: |
| **Start date (month/year)**: July 2019  **Completion date (month/year)**: August 2020 | **No. of professional staff-months provided by your consulting firm/organization or your sub consultants**:  1.0 |
| **Name of associated Consultants, if any**: | **Name of senior professional staff of your consulting firm/organization involved and designation and/or functions performed (e.g. Project Director/Coordinator, Team Leader)**:  Alfonso Guzman  Lenny Golbin  Derek Martin  Ivan Garcia |
| **Description of Project**:  A K&M client is assessing the feasibility of developing a ~20 MW biomass plant in Colombia that will use woodchips produced from a plantation in northeast Vichada. The Client has completed all the work on the first 10,000 ha plantation and the first harvest is expected to commence in 2021, producing approximately 290,000 tons of wood fiber. The Client also plans to develop a built-for-purpose chip mill at Puerto Carreño. The ideal location for the power plant is either Puerto Lopez or Puerto Gaitan. These locations are ideal as they have; i) power evacuation through the regional transmission system via 115 kV transmission lines and substations, and ii) accessibility to the Client’s plantation in Vichada through Meta river. The Client expects that the power plant will be commissioned in 2021/2. The client engaged K/M to perform a pre-feasibility study that identifies revenue sources for the project and the rules and regulations that govern how the project could access those sources. In addition, the study will include the development of a financial model to estimate the levelized cost of energy from the plant. | |
| **Description of actual services provided by your staff within the assignment**:  Plant Registration and Revenue Options: Identify and describe options to register the plant in the National Interconnected System and the alternative revenue sources.  Estimate Costs: Develop Class 5 cost estimates of the following: i) Power plant, biomass storage and interconnection capital costs, ii) Fixed and variable O&M costs, iii) Heat rate and heat content, iv) Cost of biomass delivered at the plant site (including biomass freight cost).  Estimate Returns: Develop a simplified financial model to calculate the return on equity using the revenue and costs estimates developed in Tasks 1 and 2  Roadmap: Develop a GANTT chart that shows all the steps needed, timing, and sequencing to evolve the Project from its current concept stage, to a stage in which the power plant is commissioned | |