

CSPR

					20-Jan-09
Lower Churchill Project - Contract Packages List & Engineering Deliverables by Package					
No.	Component SOW	Contract Name	Description	Contract Strategy	Engineering Deliverable Types
A-001	A	Accommodation Complex	Accommodation Complex, Including Buildings, 2000 person, Supply and Install.	EPC Lump Sum Contract & Unit Rates	Architectural layouts General Arrangement drawings Site Layout dwgs. Interface Drawings Site Location Plans and General Specifications (to be provided with all packages) Design Brief Functional Specification Commissioning / O&M Documentation
A-002	A	Accommodation Complex Site Services	Accommodation Complex Site Services including site preparation and underground infrastructure including water and sewer, sewage disposal lagoon, site grading and fencing.	Lump Sum Contract	Civil Drawings of Site Works Site Grading Drawings Water and Sewer Drawings Domestic Water Supply and Treatment Sewage Treatment Fire Water Supply and Distribution Technical Specifications Site Location Plans and General Specifications General Layout Drawings Environmental Permitting, Mitigation and Remediation Plans and Details Accommodations Complex - Power distribution from Distribution Center Accommodations Complex Outdoor Lighting Arrangements and Details Commissioning / O&M Documentation
A-003	A	Accommodation Complex, Removal of previous undergrounds	Accommodation Complex, Removal of previous undergrounds	Reimbursable	Technical Specifications Site Location Plans and General Specifications Existing Campsite Infrastructure Drawings - Site Conditions Environmental Permitting, Mitigation and Remediation Plans and Details
A-004	A	Permanent Personnel Facility	Permanent Personnel Facility (40 beds)	Contractor Lump Sum	Technical Specifications Site Location Plans and General Specifications Architectural Drawings Civil Drawings Electrical Drawings Mechanical Drawings Water Supply and Treatment Sewage Disposal and Treatment Design Brief Life Cycle Cost Analysis Environmental Permitting, Mitigation and Remediation Plans and Details Commissioning / O&M Documentation

No.	Component SOW	Contract Name	Description	Contract Strategy	Engineering Deliverable Types
C-001	A	North and South Access Roads	North and South Access Roads to Accommodation, River and Construction Bridge.	Contractor Lump Sum	Technical Specifications Site Location Plans and General Specifications Detailed Site Mapping Access Roads Plan, Profile and Sections Culvert Locations and Details Design Brief Environmental Permitting, Mitigation and Remediation Plans and Details
C-002	A	Construction Bridge	Construction Bridge (Bridge supply only)	EPC Lump Sum PO	Design Brief Functional Specification Site Location Plans and General Specifications Bridge General Arrangement, Plan and Profile
C-003	A	Construction Bridge Civil Works	Construction Bridge Civil Works including abutments and piers (foundations) for the bridge and installation of the bridge. It also includes a barge to move equipment to south side of river to construct south side pier.	Contractor Lump Sum	Technical Specifications (Including construction Barge Spec.) Site Location Plans and General Specifications Bridge Approach Dwgs. Bridge Abutment and Piers Layouts and Details Environmental Permitting, Mitigation and Remediation Plans and Details Bridge Drawings River Bathymetry River Hydraulic Data
C-004	A	Diversion Tunnel	Diversion Tunnel including the following: Open cut excavation, tunnelling, Concrete Inlet Portal, Engineered and bulk rebar and flow compensation tunnel and sediment settling. It also includes the Site Cleaning of any Borrow Pits and Disposal Areas.	Contractor with unit rate contract	Design Brief Technical Specifications Site Location Plans and General Specifications Excavation Drawings Detailed Site Mapping / Survey Control Geological Baseline Report / Site Information for Tenderers Tunnel Drawings Portal Drawings Gate Details (for info) River Hydraulic Data / River Ice Data Disposal Drawings Environmental Permitting, Mitigation and Remediation Plans and Details Flow Compensation Details General Arrangement Drawings Operability Review

No.	Component SOW	Contract Name	Description	Contract Strategy	Engineering Deliverable Types
C-005	A	Batch Plant	Large Batch Plant for Site	Contractor with unit rate contract	Functional Specifications Site Location Plans and General Specifications Environmental Permitting, Mitigation and Remediation Plans and Details Aggregate Sources Access Road Layouts Water Supply Source Concrete Production Schedule
C-006	A	Excavation excluding Dam	Excavation of Spillway, Plunge Pool, Intake, Approach Channel, Penstocks and Powerhouse Structure Including the Site Clearing of any Disposal Areas.	Contractor with unit rate contract	Design Briefs Technical Specifications Site Location Plans and General Specifications Access Road Layouts Excavation Plans and Details Foundation Preparation Dwgs. Environmental Permitting, Mitigation and Remediation Plans and Details Site Information for Tenderers General Arrangement Drawing River Hydraulic Data Disposal Drawings Detailed Site Mapping Geotechnical Baseline Report
C-007	A	Dam Works	Dam Works including survey work, clearing & grubbing, coffer dam(s), concrete cut-off wall, bulk excavation, dam construction, foundation preparation, Including the Site Clearing of any Borrow Pits and Disposal Areas.	Contractor with unit rate contract	Design Brief Technical Specifications Site Location Plans and General Specifications Access Road Layouts Excavation Plans and Details Environmental Permitting, Mitigation and Remediation Plans and Details Site Information for Tenderers General Arrangement Drawing River Hydraulic Data Disposal Drawings Detailed Site Mapping Cut-Off Wall Drawings Main Dam Plan Profile and Cross Sections Cofferdam Drawings Dewatering Plans and Details Dam Safety Instrumentation Concrete Face and Parapet Details Concrete Plyth Details Concrete Interface Dams Details Foundation Preparation and Grouting Drawings Downstream River Slope Protection Commissioning / O&M Documentation

No.	Component SOW	Contract Name	Description	Contract Strategy	Engineering Deliverable Types
C-008	A	Concrete Structures	Concrete Structures including intake, embedded parts and grounding, penstocks, spillway, powerhouse foundation.	Contractor with unit rate contract	Technical Specifications Site Location Plans and General Specifications Access Road Layouts Excavation Plans and Details Environmental Permitting, Mitigation and Remediation Plans and Details Site Information for Tenderers General Arrangement Drawing River Hydraulic Data Concrete Drawings / Embedments Foundation Preparation and Grouting Drawings Grounding Details Gate, Trashrack, and Stoplog Details (for info) Penstock Civil Drawings Powerhouse Architectural Drawings Structural Drawing Cladding Drawings Window and Door Schedules Electrical, Mechanical and HVAC Drawings Miscellaneous Steel Drawings Elevator Drawings Site Grading, Landscaping and Paving Details Warehousing / Storage Dwgs. (various types) Crane Details (for info) Equipment Life Cycle Cost Analysis Operability Reviews Commissioning / O&M Documentation
C-009	A	Fish Habitat Compensation Facility	Fish Habitat Compensation Facility - Gull Island Compensation for HADD - Harmful Alteration Disruption or Destruction (Fish Habitat)		Design Brief Technical Specifications Site Location Plans and General Specifications Detailed Site Mapping General Arrangement Drawings Environmental Permitting, Mitigation and Remediation Plans and Details HADD Detailed Drawings River Hydraulic Data O&M Documentation

No.	Component SOW	Contract Name	Description	Contract Strategy	Engineering Deliverable Types
E-001	A	Construction Power Line	Construction Power Line, substation 138KV down to 25 KV, a distribution network to Distribution Centres throughout the Construction site. Includes diesel generation for back up power.	Lump Sum Contract	Technical Specifications Site Location Plans and General Specifications Functional Specification for Diesel System Access Road Layouts Environmental Permitting, Mitigation and Remediation Plans and Details Layout for Substations and Distribution Systems Site Power SLD Site Lighting Dwgs. Distribution Detailed Drawings Transformer Dwgs.
E-002	B	Converter Stations @ Gull Island and Soldiers Pond	Converter Stations @ Gull Island and Soldiers Pond & building including electro-mechanical equipment, switchyard civil works, site preparation, fencing and services.	EPC lump sum	Power, Energy and System Studies Design Brief Functional Specifications Site Studies Site Location Plans and General Specifications Detailed Site Mapping Environmental Permitting, Mitigation and Remediation Plans and Details Access Road Layouts Switchyard Layouts (for info) Sites acSLD Electrode System Drawings (for info) Interface Documentation Life Cycle Cost Analysis Operability Reviews Commissioning / O&M Documentation
E-004	A	735 /230 KV Switchyard at Gull Island	735 /230 KV Switchyard at Gull Island including civil works, site preparation and services.	EPC lump sum	Design Brief Functional Specifications Site Location Plans and General Specifications Detailed Site Mapping Environmental Permitting, Mitigation and Remediation Plans and Details Access Road Layouts Switchyard Layouts / Grading / Drainage DC Station Service Site SLD Mechanical and Electrical Dwgs. High Voltage Equipment / Grounding Dwgs. C&P Dwgs. Transformer Dwgs. Provide Fenced Level Yard Life Cycle Cost Analysis Operability Review Commissioning / O&M Documentation

No.	Component SOW	Contract Name	Description	Contract Strategy	Engineering Deliverable Types
E-005	B	Electrode Sites Preparation	Electrode design, supply, construction and Sites Preparation including underwater cable and transition compound.	EPC Lump Sum	Sites Selection Studies Design Briefs Functional Specifications Including data for tenderers Site Location Plans and General Specifications Detailed Site Mapping Environmental Permitting, Mitigation and Remediation Plans and Details Life Cycle Cost Analysis Operability Review Commissioning / O&M Documentation
E-006	B	SOBI Submarine Cable and Installation	SOBI Submarine Cable and Installation including landing sites, transition compound (2) @ Strait of Belle Isle, cable storage building, testing and mechanical completion	EPC lump sum	Design Brief Functional Specifications Site Location Plans and General Specifications Detailed Site Mapping / Route Engineering Additional Feasibility Study / Field Work Cable Design / Laying / Protection / Landing Point and Shore Approach Eng. Environmental Permitting, Mitigation and Remediation Plans and Details Access Road Layouts Termination Layouts Site SLD Life Cycle Cost Analysis Operability Review Commissioning / O&M Documentation
E-008	B	Communications System for HVDC system	Communications System for HVDC system, and remote control & monitoring of all facilities.	EPC lump sum	Design Brief (Operational Voice Network, Administrative Data Network, Operational Data Network, Optical Transport System, Microwave Transport System, Leased Services System, VHF Radio System, Teleprotection System) Functional Specifications (all systems) Study Work (all systems) Drawings (all systems) Life Cycle Cost Analysis (all systems) Commissioning / O&M Documentation (all systems) Site Location Plans and General Specifications Environmental Permitting, Mitigation and Remediation Plans and Details Communication Network Layout Transmission Network

No.	Component SOW	Contract Name	Description	Contract Strategy	Engineering Deliverable Types
E-009	C	Transmission Line Construction and Installation	Transmission Line Construction and Installation Contract, including line clearing, access roads, foundations, anchors, tower erection, installation of hardware, string transmission and electrode lines, line camps, including communications for Transmission Line Construction.	Contractor with unit rate contract, potentially 6 Contracts.	Design Brief Technical Specifications (Construction & Installation, LIDAR Surveying, Staking, Geological Investigations & Photo Interpretation) Site Location Plans and General Specifications Access Roads, Bridges, Culverts, Clearing Dwgs. Camps / Storage Yards Dwgs. Environmental Permitting, Mitigation and Remediation Plans and Details Structures List / Sag Charts / Plans & Profiles / Line Routing Dwgs. Tower Drawings / Foundation / Hardware Dwgs. Grounding Dwgs. Life Cycle Cost Analysis Operability Review List of Free Issue Materials/ Logistics Plan List of Contractor Supplied Materials Commissioning / O&M Documentation
E-010	C	Conductor for AC / DC Overhead Lines	Conductor for AC / DC overhead lines and associated fittings, Purchase	Lump Sum PO	Technical Specifications Delivery Schedule Bill of Materials
E-011	C	AC and DC Insulators	AC and DC Insulator's, Purchase	Lump Sum PO	Technical Specifications Delivery Schedule Bill of Materials
E-012	C	Tower Steel	Tower Steel including detailing, prototype testing, foundations, anchors and bolting, Purchase	Lump Sum PO	Technical Specifications Delivery Schedule Bill of Materials Tower Family Drawings Logistics Document
E-013	C	Tower Hardware	Tower Hardware	Lump Sum PO	Technical Specifications Delivery Schedule Bill of Materials Logistics Document

No.	Component SOW	Contract Name	Description	Contract Strategy	Engineering Deliverable Types
E-014	C	Optical Ground Wire (OPGW) Conductors	Optical Ground Wire (OPGW) Purchase	Lump Sum PO	Technical Specifications Delivery Schedule Bill of Materials Logistics Document
E-015	C	Overhead Ground Wire (OHGW) Conductor	Overhead Ground Wire (OHGW) including guy wires, Purchase	Lump Sum PO	Technical Specifications Delivery Schedule Bill of Materials Logistics Document
E-016	A	Modifications to existing switchyard at Churchill Falls	Modifications to existing switchyard at Churchill Falls and associated requirements.	Contractor with unit rate contract	Design Brief Technical Specifications Site Location Plans (CF) and General Specifications Detailed Site Mapping Environmental Permitting, Mitigation and Remediation Plans and Details Existing Switchyard Layouts and Extension Layout SLD for Existing and Extension Provide Fenced Level Yard Interface Drawings Existing Switchyard Info. Existing Relay Building - Layout of new equipment / Potential Extension to Bldg. (Civil, mech., elect.) Control Room Mods (CF) Plan (Civil, electrical and mechanical) Life Cycle Cost Analysis Operability Review Commissioning / O&M Documentation
E-017	C	Transmission Line Mechanical Completion	Transmission Line Mechanical Completion	Contractor with unit rates?	Site Location Map Book Technical Specifications Tower Drawings Transmission Line Routing Plan and Profile Sag Charts
G-001	N/A	Project Office, St. John's, NL	Project Office, St. John's, NL	Unit Rates and Lump Sum	General Requirements



No.	Component SOW	Contract Name	Description	Contract Strategy	Engineering Deliverable Types
G-002	N/A	Engineering Design and Project Support Contract	Engineering Design and Project Support Contract	Reimbursable	BOD and Technical Reports
G-003	A	Catering	Catering	Contractor with unit rate contract	General Requirements Camp Layout / Buildings Info.
G-004	A	Janitorial	Janitorial	Contractor with unit rate contract	General Requirements Camp Layout / Buildings Info.
G-005	A	Security	Security	Contractor Lump Sum	General Requirements Camp Layout / Buildings Info.
G-006	A	Medical Services	Medical Services	Contractor Lump Sum	General Requirements Camp Layout / Buildings Info.
G-007	A	Site Ground Transportation	Transportation, at Site, Site to HVGB and Return and HVGB Airport to other destinations.	Contractor with unit rate contract	General Requirements Camp Layout / Buildings Info.
G-008	A	Accommodation Complex Maintenance	Accommodation complex maintenance	Contractor with unit rate contract	General Requirements Camp Layout / Buildings Info.
G-009	A	Snow Removal and Road Maintenance	Snow Removal and Road Maintenance	Contractor with unit rate contract	Technical Specifications / General Requirements Site Location Plans and General Specifications (Meteorological Data) Site Layout / Access Roads Layout
G-010	A	Fuel Supply and Dispensing	Fuel supply and dispensing	Contractor with unit rate contract	Technical Specifications Site Location Plans and General Specifications Environmental Permitting, Mitigation and Remediation Plans and Details Civil, Mechanical and Electrical Dwg.
G-011	A	Remote Sewage Disposal	Remote Sewage Disposal, washcars / portable toilets, dryhouses, including garbage collection.	Contractor with unit rate contract	General Requirements Technical Specifications Site Location Plans and General Specifications

No.	Component SOW	Contract Name	Description	Contract Strategy	Engineering Deliverable Types
G-012	A	Potable Water Delivery	Remote Sites, Potable Water Delivery, to washcars and contractors.	Contractor with unit rate contract	General Requirements Technical Specifications Site Location Plans and General Specifications
G-013	A	Electrical Distribution Contractor	Electrical Distribution Contractor Multiple, Distribution of Site power to support Construction activities. (Call-Off's)	Contractor with unit rate contract	General Requirements Technical Specifications Site Location Plans and General Specifications Load Requirements (required by designer) Site Layout (location of sub-stations) Distribution SLD / Layout and Details Detailed Site Mapping
G-014	A	Explosives Supply and Warehouse	Explosives Supply and Warehouse includes security, issuance and permitting.	Contractor with unit rate contract	Technical Specifications / General Requirements Site Location Plans and General Specifications Bill of Materials (including quantities) Environmental Permitting, Mitigation and Remediation Plans and Details
G-015	A	Reservoir Clearing	Reservoir Clearing including surveying & clearing, harvesting, collection of materials and disposal of waste, including debris and slash management.	Contractor with unit rate contract or lump sum per acre	Design Brief Functional Specifications Location Plans and General Specifications Access Points to Reservoir River Hydraulic Data Environmental Permitting, Mitigation and Remediation Plans and Details Reservoir Mapping
G-016	A	Marketing of merchantable timber. (HOLD)	Marketing of merchantable timber from reservoir / site clearing	LCP responsibility not tied to financing	Technical Specifications Site Location Plans and General Specifications (HOLD)
G-017	A	Barge Contract	Barge Contract to move Equipment to South Side to Commence Diversion Tunnel and Excavation of Spillway, Plunge Pool, Intake, Approach Channel, Penstocks and Powerhouse Structure Including the Site Clearing of any Disposal Areas, including any shoreline wharves.	Contractor Lump Sum or day rate with mob / demob	Functional Specifications Site Location Plans and General Specifications River Hydraulic Data Detailed Site Mapping River Bathymetry Access Road Layouts Environmental Permitting, Mitigation and Remediation Plans and Details

No.	Component SOW	Contract Name	Description	Contract Strategy	Engineering Deliverable Types
G-018	A	Gull Island Site Communications	Gull Island Site Communications, including Cell Towers (2), Satellite Phone, Telephone for Accommodation complex and Contractors, Cable or Satellite TV for Accommodation complex, and Computer Data Lines.	Contractor Lump Sum	Functional Specifications and General Requirements Site Location Plans Topographic Mapping Site and Camp Layout
G-019	A	Happy Valley / Goose Bay Project Office	Happy Valley / Goose Bay Project Office, including Communications, Public Relations and Administration	Contractor with unit rate contract	General Requirements
G-020	A	Happy Valley Goose Bay Hotels	Happy Valley Goose Bay Hotels (Mob / Demob) or Peak periods, including catering and Box Lunches.	Nightly rate	General Requirements
G-021	A	Freight Forwarding and Logistics	Freight Forwarding and Logistics Contract, including Custom Duties Consultation.	Contractor with unit rate contract	General Requirements
M-001	A	Turbine & Generators	Turbine & Generators, including exciters, and governors. (TBD)	EPC lump sum	Functional Specifications Site Location Plans and General Specifications Powerhouse General Layouts / Cranage Interface Drawings Site Layout Access and Transportation Details
M-002	A	Balance of Plant	Balance of Plant (TBD) including powerhouse E&M services, transformers(15/230kv), switchyard structure, electro mechanical equipment, including diesel generator back-up unit and control systems. NEED TO REVIEW STRATEGY	EPC lump sum	Functional Specifications Site Location Plans and General Specifications Powerhouse Layouts Structure Layouts Interface Drawings Site Layout Access and Transportation Details Grounding Details Structural Drawings SLD Switchyard Layout Electrical, Mechanical and HVAC Drawings Equipment General Arrangement Drawings Life Cycle Cost Analyses Commissioning / O&M Documentation

No.	Component SOW	Contract Name	Description	Contract Strategy	Engineering Deliverable Types
M-003	A	Spillway Gates	Spillway Gates (8) including Stop Logs (1 set) complete with storage and retrieval system, hoists and heating system and Guides / Concrete embedments.	EPC lump sum	Functional Specifications Site Location Plans and General Specifications Concrete Details of the Structure General Arrangement of the Structure Hoist Enclosure Details Interface Drawings Equipment Arrangement Dwgs. Life Cycle Cost Analysis Commissioning D
M-004	A	Diversion Tunnel Gates	Diversion Tunnel Gates (4 sets) and Flow Compensation Gate (1) including gate hoists and Downstream Stop Logs (2 sets) and Guides / Concrete embedments.	EPC lump sum	Functional Specifications Site Location Plans and General Specifications Concrete Details of the Structure General Arrangement of the Structure Interface Drawings Equipment Arrangement Dwgs. Commissioning Documentation
M-005	A	Intake Gates	Intake Gates (5 sets) including Bulkhead Gates (1 set), Trashracks (5 sets), hoists and heating system and Guides / Concrete embedments and trash removal system.	EPC lump sum	Functional Specifications Site Location Plans and General Specifications Concrete Details of the Structure General Arrangement of the Structure Hoist Enclosure Details Interface Drawings Equipment Arrangement Dwgs. Life Cycle Cost Analysis Commissioning Documentation
M-006	A	Draft Tube Gates	Draft Tube Gates (2 sets) complete with storage and retrieval system and Guides / Concrete embedments.	EPC lump sum	Functional Specifications Site Location Plans and General Specifications Concrete Details of the Structure General Arrangement of the Structure Interface Drawings Equipment Arrangement Dwgs. Commissioning Documentation
M-007	A	Powerhouse Crane	Powerhouse Crane Supply and Install	EPC lump sum	Functional Specification Equipment Arrangement Dwgs. Commissioning Documentation

No.	Component SOW	Contract Name	Description	Contract Strategy	Engineering Deliverable Types
M-008	A	Powerhouse Building	Powerhouse Building including the supply and installation including Structural Steel, Cladding, HVAC, and Electro-Mechanical Equipment, associated with the Powerhouse Building.	Lumps Sum PO	Technical Specifications Civil and architectural dwgs. Mechanical and electrical dwgs.
M-009	A	Elevator	Elevator, Supply and Install	EPC lump sum	Functional Specification Equipment Arrangement Dwgs. Commissioning Documentation
M-010	A	Hoist Enclosures for Gates and Hoists	Hoist Enclosures for Gates and Hoists	Lump Sum PO	Technical Specification Enclosures Dwgs.