

Appendix B: Economic Development Opportunities

The following are a summary list of the 108 BC Hydro Agreement forecasted opportunities ranging from \$10,000 to \$215,000 from 2014 - 2034, as identified by Koho Power (2014). This summary was requested due to the lack of the report's ability to succinctly identify these for Tsla'ah Development Corporation and member use. It is recommended that any interest by members should meet with the TDC to undertake planning that is consistent with existing BC Hydro procurement and contracting processes and criteria.

The forecast for skills and contracts is derived from the BC Hydro workload forecast for the 2014-2034 period. The summary below also shows the skill set required, however at the time of writing the report Koho stated that there was insufficient information from BC Hydro to establish the exact numbers of each trade required.

Skills

The skills identified in the report include: Welding and fabrication shop; Industrial/Commercial Electricians; Plumbing; Civil construction labourers (formwork, pour, etc.); Landscaping (brushing and vegetation management); Vehicle Maintenance; Flagging; Site First Aid services; Transportation; and General trades (labouring with some mechanic skills) (p. 11).

The skills needed for 2014/15 near term work, p.13, included:

<i>Skills</i>	<i>Number of Projects</i>
General Trades	33
Welding	29
Mechanic	20
Electrician	20
P&C	16
Concrete/Cement Masons	14
Engineering	13
Pipe fitters	12
Heavy Equipment Rental	9
Millwright	7
Fencing	6
Earthworks	5
Roads	4
Architectural	4

Additional forecasted skills, identified (pg. 19) for the next twenty-year period include:

<i>Skills</i>
Welder
Culinary Worker
Framer
Former
Cement Mason
Roofer
Fabricator
Labourer
Painter
Electrician
Pipe fitter
Carpenter
Boat operator

Additional skills being developed with TDC partners for larger Seton specific opportunities also include concrete restoration, shotcrete training, and materials testing (as needed), and hospitality experience for the cabins and hotel currently in development by Seton for BC Hydro staff.

Contracting Opportunities

The contracting opportunities (for qualified businesses) listed in the Koho Report include: Heavy equipment rental; Construction management; Civil engineering; Power line repair/construction; Mapping; Logging; and Fire fighting services.

Annual contracting opportunities listed in the report, p.13, for: service contracts; projects for immediate procurement; and projects to be managed by others/BC Hydro, are as follows:

<i>Services</i>	<i>Crew/Equipment needed</i>
Freight And Transportations Services	Transportation Operators
Catering Services	Mobile Food Preparation
Warehousing (suggested Bridge/Lillooet)	Facility Space
Waste Management Services	Collection Services
Construction Workers Rental Accommodation (Seton)	Building Construction
Trailer Rentals, Maintenance And Janitorial Services	General Trades, Equipment
Drafting, Construction Scheduling And Cost Control Services	Architectural/Drawing Project Management
Survey & Mapping Services	GIS, Mapping, TK Studies
Environmental Services	Conservation And Restoration, Haz Mat Response
Security Services	Security Personnel
Firefighting Services	Paramedic, Fire Science/Safety, First Responder Training
First Aid Services	Paramedics, Safety Services, Emergency Vehicle
Vehicle Repair Shop (Bridge)	Mechanics, Towing, Heavy Duty Mechanic

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Comment [1]: Darryl I believe that given the headings that this outlines near term work (2014/15). Please confirm.

Additional contracting opportunities, (p. 19), include:

<i>Services</i>	
Construction Management	Concrete Work
Heavy Equipment Supply	Vegetation Management
Logging	Firefighting
Traffic Services	Accommodation
Mapping Services	Welding and Fabrication
Towing	Security Services (First Aid Services)
Catering	

Full list of Known / Forecast BC Hydro Projects (Sorted by Facility)

<i>Location</i>	<i>Project Name</i>	<i>Let Year</i>	<i>Value (\$k)</i>
La Joie	Sump Pump Station Upgrade		
La Joie	Dam Improvements	2024	
La Joie	Dam Water Passage Reliable Discharge	2013	
La Joie	Inspect and Repair Debris Boom	2015	
La Joie	Downton Reservoir Debris Boom Maintenance	2015	
La Joie	Replace gen radiators	2015	\$367
La Joie	Replace Intake Tower Access Bridge	2015	\$1,300
La Joie	Stn Sump U/g	2015	\$ 250
La Joie	Stn service U/G	2016	\$ 350
La Joie	Dam concrete repairs	2015	
La Joie	Powerhouse cladding replace	2023	\$1,300
La Joie	Powerhouse roof replace	2023	\$ 1,300
La Joie	PRV replace	2025	\$ 9,400
La Joie	TIV replace	2025	\$9,800
Terzaghi Dam	Dam Instrumentation Upgrades	2019	\$2,400
Terzaghi Dam	Debris Removal	2015	
Terzaghi Dam	Improve LLO reliability	2022	\$ 26,000
Terzaghi Dam	Upgrade embankment dam stability	2035	\$215,000
Bridge River 1	Relocate Area Office	2019	\$ 7,000
Bridge River 1	Replace Powerhouse Pipe Systems	2013	
Bridge River 1	On line gas monitoring	2015	\$192
Bridge River 1	U1 Brushgear dust collector	2015	\$ 140
Bridge River 1	U1-U4 Penstock Interior and Exterior Recoating (11 year job)	2018	\$47,000

<i>Location</i>	<i>Project Name</i>	<i>Let Year</i>	<i>Value (\$k)</i>
Bridge River 1	Penstock Leak Detection and Protection Installation	2013	\$8,200
Bridge River 1	PIV Bypass Valve Replacement	2015	\$850
Bridge River 1	BR1 Replace Wheelpit stoplogs	2016	\$532
Bridge River 1	Replace PH roof	2017	\$1,400
Bridge River 1	BR1 Slope Drainage Improvement and Debris Flows	2015	
Bridge River 1	Intakes Upgrades	2024	
Bridge River 1	Carpenter reservoir debris & boom maintenance & remove debris at spillway abutment		
Bridge River 1	Tunnel Repairs (shotcrete)	2015	\$1,000
Bridge River 1	Replace T1/2 transformers	2013	\$21,200
Bridge River 1	U4 gen and gov u/g	2015	
Bridge River 1	U1 gen and gov u/g	2019	\$26,300
Bridge River 1	U2 gen and gov u/g	2020	\$27,400
Bridge River 1	U3 gen and gov u/g	2021	\$28,600
Bridge River 1	Stn sump u/g	2015	\$255
Bridge River 1	Guardrails u/g	2015	\$156
Bridge River 1	Fire escape ladder	2015	\$187
Bridge River 1	Access for Intake tunnel	2015	\$57
Bridge River 1	T1C (Tx) retirement	2015	\$223
Bridge River 1	PH utility air replace	2015	\$2,000
Bridge River 1	Level 2 security u/g	2017	\$3,000
Bridge River 1	Improve auxiliary facilities	2018	\$2,400
Bridge River 2	U5 and U6 Penstock Interior Strip and Recoat	2020	\$15,400
Bridge River 2	U7 and U8 Penstock Interior Strip and Recoat	2022	\$16,900
Bridge River 2	Station Sump Upgrades		

<i>Location</i>	<i>Project Name</i>	<i>Let Year</i>	<i>Value (\$k)</i>
Bridge River 2	PIV Hydraulics, Controls, Bypass	2015	\$ 475
Bridge River 2	Replace Cooling Water Flow Gauges	2017	
Bridge River 2	BR2 Electrical PN u/G	2013	
Bridge River 2	BR2 480V CB and Metalclad s/g U/G program	2013	
Bridge River 2	Replace intake tower access bridge	2015	\$324
Bridge River 2	Station and CB Air piping replacement	2018	\$2,400
Bridge River 2	Replace U7/8 Wheelpit platforms	2015	\$500
Bridge River 2	U5 U6 Wheelpit concrete repairs	2015	\$300
Bridge River 2	Replace PH roof	2016	\$1,200
Bridge River 2	Station Sump Upgrade	2015	\$300
Bridge River 2	Intakes Upgrades	2024	
Bridge River 2	G5 G6 Governor air comp	2015	\$ 10
Bridge River 2	Tunnel repairs	2023	\$400
BRR Area		Bridge inspections	
BRR Area	Prevent battery room explosion	2016	\$350
BRR Area	Vegetation management program	2015	\$25
BRR Area	Fire system deficiencies	2015	\$70
BRR Area	Carpenter debris boom maintenance	2015	
Seton	Spillway Gates Upgrade	2013	\$21,900
Seton	Penstock Interior Recoating	2021	
Seton	Headworks Gates Refurbishment (HWOG)	2015	\$500
Seton	Headworks Gates Upgrade (HWOG)	2020	\$39,000
Seton	Sump Pump Replacement	2015	\$10

<i>Location</i>	<i>Project Name</i>	<i>Let Year</i>	<i>Value (\$k)</i>
Seton	Seton Canal Dewatering and Maintenance Repairs	2016	
Seton	SI-TS-171 "SON 1264 Build 3 Phase Tie"		
Seton	SI-TS-171 "SON 1265 Relocate Inaccessible Line"		
Seton	Unit Gen and Gov U/G	2018	\$48,000
Seton	Trashrack repair	2015	\$40
Seton	Replace INOG Hoist	2016	\$425
Seton	Draft tube maintenance gate replace	2014	\$1,000
Seton	Draft tube elbow concrete repairs	2015	\$50
Seton	G1 Turbine welding repairs	2015	\$60
Seton	Replace powerhouse roof	2018	\$1,200
Seton	Replace powerhouse siding	2018	\$1,200
Seton	Recoat penstock interior	2024	\$3,600
Seton	Upgrade aqueduct seismic	2030	\$11,800
Seton	Transformer replace	2030	\$4,600

Service contracts	Construction workers rental accommodation		
Service contracts	Catering services		
Service contracts	Telecommunications (telephone & internet)		
Service contracts	Lillooet/BRG bus and/ or water-taxi services		
Service contracts	Freight/ transport services		
Service contracts	Trailer rentals, maintenance and janitorial services		
Service contracts	Drafting,		

	construction scheduling and cost control services		
Service contracts	Survey & mapping services		
Service contracts	Environmental services		
Service contracts	Waste management services		
Service contracts	Security services		
Service contracts	Fire fighting services		
Service contracts	First Aid services		
Service contracts	warehousing		
Service contracts	vehicle shop		

Major Projects for Immediate Work pages 31-40 included in the Koho report are being reviewed by the Tsah'alh Development Corporation for consideration with potential partners.