Tasks to be Completed R. Dryden PE 15-May-12

Note: This list is provided to categorize tasks yet to complete, which Robert Dryden PE is current involved and could probably complete in less time and with less money that other firms. As noted, some of these projects could be done by other firms or in conjunction with other firms, or even by other in-house staff. The hours and costs estimated are best guess and although Power & Control Engineering will attempt to hold expenditures close to these estimates, many projects costs are not within the engineer's control. Estimates are not offered as not to exceed estimates.

Task	Facility	Description	dayıc	hrs @ 8	Labor Estimate	Misc. Costs	Comments
	Facility	Description	days	hrs/day	Estimate	Wilse. Costs	
1	Clean Up	File all project information, file drawings, write up project summaries.	5	40	\$5,600		Move material to server, box up projects, get three ring binders and other files organized.
2	Clean Up	Island Cables - clean up files and file survey descriptoins with NOAA	2	16	\$2,240		This needs to be surveyed using our highly accurate GPS system. I need Kent Bovee to run the GPS system.
3	Clean Up	Radio Licenses - get turned over to someone.	0.5	4	\$560		Andy and Robert Dennard
4	Communications	Communications Plan - SMC III Conduit & ACS Interface	4	32	\$4,480		Continued work with DOT and ACS on conduit.
5	Communications	Communications Plan - Fish Valve and BL Dam Site		2	\$280		Continued work with line crew and Mike Carson on getting this in. Should not be much.
6	Communications	Communications Plan - Green Lake Connection	10	80	\$11,200		Spec out microwave link, specify equipment, work with Tal & Jeff.
7	Communications	Communications Plan - Industrial Park Substation		0	\$0		Work with ACS & Tal to get this switched over from radio link. Andy may take care of this with a TLS drop.
8	Fish Valve Hydro	Fish Valve Hydro Controls Upgrade-Design	8	64	\$8,960		Complete design of wiring conversions in panels.
9	Fish Valve Hydro	Fish Valve Hydro Controls Upgrade-Cutover	5	40	\$5,600		Work with Bruce and Tal during the cutover to check out equipment and get the control software working.
10	Governors, Green Lake and Blue Lake	Complete Documentation for this project	3	24	\$3,360		Right now waiting on GE to return as-built drawings.
11	Green Lake Plant	Control Room Panel Upgrade	8	64	\$8,960		Finish drawing up panels, work with Controlled Power to get panels made, and punched. Need wiring diagrams. Good job for EPS, if we can get them.
12	Green Lake Plant	Generator Bearing Lift System	2	16	\$2,240		Waiting for wiring and plumbing installation. I would work with Bruce if the logic schematic does not work.
13	Green Lake Plant	Emergency Generator Controls	5	40	\$5,600		Logic is complete. Finish wiring diagram for this, order parts and work with Bruce to get installed. Tal must program. This will act as a prototype for the Blue Lake emergency
14	Green Lake Plant	Cushion Air Control Panel	3	24	\$3,360		This would be best done by a panel shop after laying it out with Tal & Bruce.

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15	Jarvis	Air Quality Permit		0	\$0		Title V must be completed for existing equipment. A construction permit must be started once a turbine is selected.
16	Jarvis	Tank Farm Upgrade		0	\$0		This is designed and must be project managed by someone.
17	Jarvis	Turbine Addition		0	\$0		I will turn all the substation work over to Mike Carson. We are still waiting to see if money will be forthcoming with regard to a new turbine. If I become involved, it would be a major
18	Jarvis	ZZZZ Compliance, Catalytic Exhaust Silencers		0	\$0		Hopefully, this issue will go away with pending legislation.
19	Jarvis	SPM Synchronizers for D1, D2, D3	2	16	\$2,240		Just need to draw it up.
20	Jarvis	Diesel Tank Inspection	10	80	\$11,200		This is a couple years overdue. We have no place to put the fuel. We thought we would have a second tank by now.
21	NSRAA	Substation at NSRAA Hatchery-containment design-re-orient transformer	2	16	\$2,240		Design a containment area, rotate transformer. This could be farmed out to Ryan Wilson, the civil engineer in town.
22	Planning	Generation Planning Study - 10 Year	3	24	\$3,360		I need to check over the study done in February 2011, add executive summary and debt service numbers.
23	Planning	Transmission & Distribution Planning Study - 10 Year	4	32	\$4,480		I need to document my thinking on this, not a big formal study, but what I think needs to be done based on my 9 years here.
24	Spill Plans	Substations, power plants.	10	80	\$11,200		This is a couple years overdue. We have draft updated spill plans done by HMH but never completed and turned in.
25	System	Arc Flash Studies, labelling, protective gear, etc. This is an OHSA requirement for the entire	10	80	\$11,200		We have a proposal from EPS for about \$42000 to do this. EPS and I got the model up to the level to determine values for the switchgear at the new Blue Lake Plant. The City owns the
26							

Total

Cost \$108,360