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California Energy Commission
Sacramento, CA

Re: Docket number 11-RPS-01

To the California Energy Commission:

Done in appropriate locations at appropriate scale, hydroelectric power can be reliable low-impact low-carbon energy. Much of what is occurring and proposed in BC is poorly regulated large scale and high impact development with many negative environmental and social impacts. Thank you for this opportunity to present some information and perspectives.

Concerns about Hydroelectric Power Generation in British Columbia

Friends of Bute Inlet is a citizens organisation that includes an active core group and community network for sharing information about proposed developments in our area. We encourage corporate responsibility, democratic practice, public involvement, and seek governance that protects coastal ecosystems and encourages energy conservation. We organized when major hydroelectric developments began to impact local rivers and prime wilderness habitats in the area we call home.

Most of us live near Bute Inlet, next to BC's highest mountains, where Plutonic/Alterra and General Electric plan to produce 1023 MW at the largest of many private power projects proposed for BC's south coast. At Bute Inlet they want to dam 17 rivers and tributaries in all four watersheds, and divert up to 95% of river flow into 88 km of pipelines leading to 16 powerhouses and substations; which involves building 300 km of road and 110 bridges, all in a rugged wilderness valley so remote that delivering power to the grid requires 443 km of linear clearcut through some of BC's most healthy, productive and beautiful coastal forest.

There is a 196 MW project recently completed (by Plutonic-Alterra & GE) on two rivers at nearby Toba Inlet (which is proving some of our concerns) and a third project that diverts two more rivers approved for construction at the upper Toba Valley. Many other large projects are proposed for this coastal rainforest wilderness. If approved, private industry will divert hundreds of rivers and create an industrial power corridor the length of BC's wild coast.

The scale of these projects is enormous. It's difficult to imagine the remoteness and difficulty of access. The area is Himalayan in its steep extremes – and its natural beauty. Fearsome weather events are the area's other claim to fame: Bute Inlet has record of the fastest wind speed and some of the craziest ocean conditions in the northern hemisphere, along with temperatures that range from tropical to sub-arctic. The rivers are raging, shifting, gorgeous, unpredictable – and full of life.

Expert scientists inform us that rivers of the north pacific are the world's last undeveloped watersheds, they are biologically productive ecosystems that provide habitat for healthy viable populations of grizzly, mountain goat, marbled murrelet, rare amphibians, 5 species of salmon, rare trout and other red and blue listed species. The interconnectedness of these healthy ecosystems is not fully understood; we don't even have baseline data for many of these areas. We do know that in 2012, on a planet that is undeniably threatened by human impacts, that BC's wilderness rivers are mostly still natural and healthy. Our coastal rivers that are fed by massive glaciers will run cold and sustain their ecosystems past when other river systems are affected by climate change. We are all guardians of this precious wealth.

I was asked to speak to the following statement, suggested by the CEC as a talking point:
"Projects ~~may~~ WILL impact recreation, aesthetic values and BC's tourism economy"

Clearly, if even only a quarter of the 800 proposed hydro projects proceed, aesthetic impacts to BC's wilderness image will be significant. Almost every tourism advertisement for BC includes pictures of wilderness: pristine mountain vistas, forests, waterways and wildlife. But real wilderness is increasingly threatened in BC - and it's a sure casualty of river diversion power projects. The immediate visual impacts of power projects are obvious. It's hard to sell hiking trips in an industrial landscape and you can't fly-fish in a riverbed that's empty. High voltage transmission corridors criss-crossing the landscape and rivers in pipes don't create tourism advertisements.

My family runs a small lodge and kayak touring company – and by the way, we are off-grid and for 30 years have operated with energy provided by a small creek and hydro system. But what's important is that we are totally dependent on the ecosystems and natural beauty and of our area. So are all the lodges, fishing guides, whale watching and wildlife tours, boat tours, hiking tours, etc. All these small businesses create a cascade of economic spin offs in the wider community. Tourism is a multi-billion dollar industry in BC. (It's surpassing our unfortunately-mismanaged and shrinking forest industry.)

This area's high value local fly-fishing industry has already been affected by private power developments. Another directly affected recreation is river kayaking, for which BC is renowned. The infamous Ashlu development ruined a phenomenal paddling river. Many excellent recreational rivers are already diverted; the writing's on the wall for more. Right now, the beautiful Kokish River awaits its fate: Department of Fisheries and Oceans is soon to decide on the proponent's ability to "compensate" for damage to high value fish habitat after they pipe 98% of the river's flow for 9km of its 10 km length. (Why these developments are in fact *river diversion*, not "run-of-river" as industry claims.)

Tourists choose British Columbia for wilderness experience that's pristine, and local tourism operators do suffer economic impacts when wilderness aesthetics and natural values are destroyed. *Our disturbed customers ask why we allow these things to happen?* But harnessing rivers has impacts that go beyond aesthetics, and what's being proposed for BC is not industrialization of just a few rivers! If you look at a map of proposed projects, the clustered developments and cumulative environmental impacts are staggering to contemplate.

At Bute Inlet proposal where all the major rivers and tributaries will be harnessed, there WILL be impacts to river ecologies. Nobody denies this and nobody knows how much, but present-day policies

are abandoning precaution! Impacts to river habitats affect many things, including salmon, which is the foundation of BC's wilderness tourism industry. Salmon provide sport and food for us, and they are main diet for grizzly bears, sea lions, orcas, eagles – all those iconic images for Tourism BC – which depend on salmon and healthy river systems.

The big picture of hydroelectric generation in BC's wild places is a real loss to recreation: it's bad for wildlife, bad for nature lovers, and bad for BC's tourism industry, which includes thousands of sustainable family businesses that promote the importance of environmental stewardship.

Thank you, California for viewing BC from a distance and for taking a dispassionate look at whether you want to support developing energy that destroys so many natural values. Thank you for listening to different perspectives and I hope you will include precaution in your decision.

A few more comments relating to the East Toba Montrose hydroelectric project:

Public Information: Friends of Bute Inlet (FOBI) got started when Plutonic power failed to schedule public information meetings for the Bute Inlet project at communities that are closest and most affected by the mega project proposals. The already-approved projects at Toba Inlet had slid through environmental processes with minimal publicity and without alerting public opposition. A large amount of public concern, major environmental issues, uncertain markets, and construction challenges at Toba Inlet have conspired to put the proposed Bute Inlet project on hold. The remote EastToba-Montrose project was under construction for approximately two years and became operational in August 2010.

Toba Inlet is a remote wilderness watershed where no one lives and where almost no one is watching. Many of BC's proposed hydropower installations are located in isolated wilderness locations; those on the remote (un-roaded) coast are particularly difficult and expensive to access. Public access is often restricted or prohibited by proponents; this makes real oversight almost impossible – and also limits what were once freely accessible wilderness areas. The East Toba Montrose project includes 2 power stations, 156 kilometres of transmission line, 62 kilometres of new and substantively upgraded road. The project underwent an environmental assessment and was approved by both the provincial and federal governments in 2007. It has a generating capacity of 196 megawatts.

During 2010, Friends of Bute Inlet (FOBI) followed project progress through bi-weekly "independent environmental monitoring" (IEM) reports that were brief and frequently posted late. Project IEMs (paid by the proponent) provided most of the oversight; Ministry of Environment and DFO were on site a few times during two years of construction. Overall, gathering public information has been difficult and frustrating. We can read the company's optimistic shareholder reports. From a few workers we've heard about labour issues, challenging weather, steep terrain, environmental concerns and extreme construction costs at the remote location. There were some serious accidents and several deaths. WorkSafe B.C. recently fined the contractor Peter Kiewit Infrastructure Co., \$250,000 for committing "high risk violations knowingly or in reckless disregard of its statutory health and safety obligations" that resulted in the death of 24-year-old worker.

An energy sector official at BC's Environmental Assessment office (EAO) recently confirmed the Annual Environmental Monitoring Report for East Toba Montrose (May 27, 2011) was posted Feb 16, 2012 – eight months late because it needed "review." The EAO does not perform regular onsite inspections; instead relying on the Ministry of Forests, Lands & Natural Resources (FLNR) for field reviews. The last

inspection was August 2011, and the site inspection report is not public information, because policy is that “internal audits” are not posted. The official indicated he may *possibly release some information from the report, but only after he consults with the company*. Since there was a field inspection in 2011, he said there will probably be no government oversight visit in 2012 - presumably a site visit will occur in 2013. [*It bothers me that Canada’s federal government is giving the company an “eco-energy” grant subsidy of \$73 million dollars. ... but the public coffers haven’t got enough money to make sure that corporations aren’t wrecking the place!*]

There was one public alert about serious issues by the Department of Fisheries and Oceans (DFO) regarding stream sediment issues and a number of landslide, flood and washout events. DFO recently confirmed there is an unresolved compliance and enforcement issue at Toba, but declined to offer information. I did find out the issue relates to sediment impacts, stream crossing(s) and dates from early winter 2009. DFO will perhaps talk about it later, after the “issue” is resolved. DFO said there were many stream problems during construction, most involving sediment, erosion control and materials deposited in fish habitat. DFO said *any time* you have these kinds of projects in this kind of terrain, with coastal weather and soil conditions - *there will be erosion control issues and sediment impacts*. DFO personnel have limited time and no budget for onsite visits. He said *if there are future projects there should be more scrutiny and more DFO presence*. Given fiscal realities, he said he doesn’t know how or if that could happen. DFO was not on site in 2011.

There have been a lot of stories about challenges at Toba and the other inlets. Old timers with an accumulated wealth of wisdom say that Toba is just a heads-up for the physical impossibility of Plutonic’s much bigger ambitions at Bute Inlet, which is itself many times more steep, rugged, remote, wild, inhospitable and difficult terrain. There are also “rumours” quite reliable but published nowhere, about challenges at the newly operating Toba plant: Both 2M turbines were scoured by the river water’s glacial silt, requiring replacement within 6 months. The penstock is suffered similar “sandblasting” and currently there is an estimated \$20 million repair underway on both 5 km (buried) penstocks, with a 100-person crew on site in a barge camp, and power production was “out” for several months this winter... Workers tell of washouts and landslides and terrain instability that portend something big waiting to happen. We know more about Bute Inlet where there is still public access and information about the natural landscape. These are landscapes of shifting rivers with unbelievably steep and inherently unstable terrain.

Another rumour is about “islands of silt” behind the weirs. (We have concerns about the unknown effects of flushing mud from the head-pond.) DFO confirmed receiving a communication from the proponent saying they were considering dredging behind the weirs. There is no public information available about whether this occurred, what it looked like before, during or after any silt dredging process. Reports of any downstream effects would presumably be in the annual report which will be presented long past when any concerns could be usefully investigated.

Environmental Assessment in BC was thoroughly critiqued in a report by the Environmental Law Centre at University of Victoria. http://www.elc.uvic.ca/publications/documents/ELC_EA-IN-BC_Nov2010.pdf This should be required reading for anyone who wants to know about how hydro projects in BC are considered for approval.

The Forest Practices Board (FPB) is BC's independent watchdog for sound forest practices. It audits complaints and can make recommendations to improve practice and legislation. In response to a complaint from FOBI and Sierra Club BC, the FPB conducted an investigation that included an onsite visit with the proponent. FPB Report: Forest Resources and the Toba Montrose Creek Hydroelectric Project [http://www.fpb.gov.bc.ca/IRC175_Forest_Resources_and_the_Toba_Montrose_Creek_Hydroelectric Project.htm](http://www.fpb.gov.bc.ca/IRC175_Forest_Resources_and_the_Toba_Montrose_Creek_Hydroelectric_Project.htm) The Board found that while Plutonic generally followed legal and contractual requirements, "there was no coordinated approach for how and when government oversight would occur or who would lead it," pointing to potential serious environmental problems for future projects.

- The FPB report documented more than 100 fuel spill incidents during East Toba Montrose construction, one of over 900 litres.
- Sedimentation of streams, including fish streams was also singled out as a concern.
- Plutonic chose to pay a \$150,000 fee for leaving 45,000 cubic metres of wood (= 1100 logging truck loads) on the TL corridor rather than incur cost of harvesting at remote sites.
- 36 ha were removed from Old Growth Management Areas (OGMA) for the project; government required only 1 ha to be replaced. (FPB concern: that OGMA's are "whittled away over time")
- Forest and Range Practices Act (FRPA) regulations for forest companies do not apply. For private power producers (classed as "minor tenures") there are no clear regulations about introduction of invasive plants, soil disturbance limits, retaining wildlife trees, and restrictions on harvesting and road building in areas next to fish streams. Temporary roads do not have to be built to the same standards as required of the forest industry.
- The cumulative effects assessment was limited and did not include effects of previous development at the area. The Report says assessment was "consistent with the limited legal requirements, but differed substantially from federal policy."

Overall the FPB Report revealed uneven environmental standards and inadequate government oversight for river diversion projects in BC.

For all the reasons given here, and many more, hydroelectric power from BC is not low-impact and does not meet California Renewable Portfolio Standards. As the "liquid gold rush" in BC has proved, markets play a big part in driving development pressures. We appreciate California's ethical review of energy purchases and the State's willingness to apply and maintain environmental standards and that are more rigorous than standards and practice in BC. Thank you for the opportunity to provide these comments.

Sincerely,
Lannie Keller

For Friends of Bute Inlet