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Attention:

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and

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About the Sunshine Coast Conservation Association (SCCA)

The SCCA is a registered charity and environmental non-government organization. Our mission is to seek protection of biodiversity in the greater Sunshine Coast region, roughly defined as the area of the Sunshine Coast Forest District. We approach this mandate through public education and participation in all public venues and processes where biodiversity values are at issue. We are very interested in the development of "green power" alternatives and have approached the draft Terms of Reference as an opportunity to suggest measures to achieve genuine sustainability. For more information about the SCCA, please visit our website at www.thescca.ca

Review of the Draft Terms of Reference for the British Columbia Environmental Assessment Office (BC EAO) Environmental Impact Assessment and Canadian Environmental Assessment Agency (CEAA) Environmental Impact Statement for the Bute Inlet Hydroelectric Project (the Project)

Land Use Planning Background

The Sunshine Coast Forest District is one of the very few areas in British Columbia that does not have a higher-level strategic land use plan. There are some elements of higher level planning in place, for example Landscape Unit Plans (LUPs) which are intended to protect representative old growth. About one-third of region's landscape units have designated LUPs, a few more landscapes have draft plans and the rest are subject to a non-spatial Ministerial Order. The province also has the Identified Wildlife Management Strategy through which the land base needs of species and ecosystems at risk can be identified and Wildlife Habitat Areas (WHAs) can be proposed. The LUP and IWMS processes are almost entirely inactive and have only succeeded in establishing some protection for lands that are not contributing to the Timber Harvesting Land Base (THLB). These processes are heavily constrained by policy and regulation such that they cannot "unduly restrict the flow of timber from crown lands". Basically, British Columbia does not practice "land use planning" in the greater Sunshine Coast region but it does have a bewildering hierarchy of agencies and sectors, each with overlapping mandates, conflicting authorities and unique land use designations that do not apply equally to all agencies and stakeholders.

Another land use process that is currently underway relates to recovery planning under the auspices of the *Species-At-Risk Act* (SARA). These processes have, to date, not been very effective in the case of the Marbled Murrelet, a *Threatened* Pacific seabird. The Marbled Murrelet Recovery Team has made recommendations to stabilize rapidly declining populations. British Columbia has so far refused to incorporate these recommendations into provincial policy, despite the fact that it is an offense under SARA to kill, capture or harass the bird or disturb its residence in any way whatsoever.

Four First Nations in this region have, or are completing, land use plans for their traditional territories. These plans are broadly based comprehensive efforts that recognize current conditions and offer broad land use zoning. Considering the implications of recent decisions from the BC Supreme Court, First Nations land use plans and opinions have considerably more authority and jurisdictional weight than has been previously accepted.

More immediately pertinent to the issue of the draft Terms of Reference for the Bute hydroelectric project is the fact that there has not been any strategic land use planning for the energy sector in this region or even in the province as a whole. Professor George Hoberg and lawyer Greg Gowe, in an opinion piece for the Vancouver Sun on February 13, 2009, state:

The fundamental public policy problem... is the lack of an integrated provincial or regional planning process for the new [IPP] electricity supply.

It is against this backdrop of neglected land use planning, uncompleted wildlife protection processes and conflicting jurisdictional issues that the public is being asked to comment on draft terms of reference for a major hydroelectric project that will undeniably have significant negative impacts on natural resources in the greater Sunshine Coast region.

Introduction to the Project

Plutonic Power Corporation (Plutonic) proposes to construct a large-scale complex of run-of-the-river hydroelectric plants around the head of Bute Inlet, which is located in the most northern portion of the Sunshine Coast Forest District. Seventeen hydroelectric plants are proposed to be constructed on creeks draining the Homathko, Orford and Southgate Rivers. Collectively, these facilities would have a nameplate generating capacity of 1,027 MW. Their power would be collected to a substation through a 216 km network of 230 kV transmission lines, then routed to the British Columbia Transmission Corporation (BCTC) Malaspina substation (near Earls Cove, BC) via a 227 km-long 500 kV transmission line. The project would also see the construction of several hundred kilometers of roads and numerous barge landings, bridges, construction camps, and other supporting infrastructure.

Plutonic Power also has a number of other projects in the same northern portion of the forest district, including East Toba Montrose (196 MW) and Upper Toba (166 MW). Other hydro generating companies are also active in this same area; Hawkeye Energy, for example, has proposed 22 similar run-of-the-river projects in the same headwater areas of Bute and Toba inlets.

The size of the Bute project and the need for numerous provincial and federal permits triggers both the *BC Environmental Assessment Act* (BCEAA) and the federal *Canadian Environmental Assessment Act* (CEAA). There is immediate and obvious potential for impacts on fish, including several commercially-valuable species dwelling in the above rivers. In addition, four species of Identified Wildlife (the Marbled Murrelet, Mountain Goat, Grizzly Bear, and the Northern Goshawk) are present in the region, raising concerns about potential terrestrial impacts.

We have reviewed the draft Terms of Reference for an Application for an Environmental Assessment Certificate pursuant to the *British Columbia Environmental Assessment Act* and the

draft Guidelines for the submission of an Environmental Impact Statement pursuant to the *Canadian Environmental Assessment Act*. We have also reviewed Plutonic's revised Project Description (dated December 19, 2008) for the project. What follows are our comments and recommendations relevant to the above documents.

Issues

Project Description

In many respects, the Project Description is incomplete and its submission in support of the development of Terms of Reference is premature. There are many instances where a promise of intent is substituted for a proper description of the project. For example:

Borrow sites will be developed as rock quarries adjacent to the upslope side of access roads along the valley sidewalls where there are no fish-bearing streams or wetlands in the associated disturbance areas. In the unlikely event that suitable gravel deposits are identified elsewhere these will only be developed where the associated disturbance area does not conflict with fish habitat.

No planned borrow pits or quarries have been described in detail (*i.e.*, site location, dimensions, estimated tonnage, anticipated blasting and excavation requirements, duration of excavation) or shown on a map by the proponent, though "quarry roads" are shown on maps (*e.g.*, Figure 5 - Homathko East-West Mainline Access Overview Map). There are engineering estimates for existing, re-activated and new roads, and other constructed facilities and infrastructure, from which the proponent should be able to calculate the amount of aggregate needed for the project. This is a significant omission because there is a substantial difference between developing a single quarry to supply 50,000 tonnes of aggregate and developing five to eight quarries (with infrastructure) to supply that amount of aggregate.

The omissions are not restricted to information about borrow pits. The proponent indicates their intent to develop numerous services and ancillary infrastructure that include:

... barge landings, water supply, waste disposal, material requirements, energy supply, work camps, radio towers, and staging areas. Final locations and arrangements for these infrastructure/resources continue to be investigated, but Plutonic intends to situate and select locations and arrangements that make the most efficient and benign use of available resources. Required ancillary services such as fuel and equipment delivery will be determined on an as needed basis and will also be managed in a manner that meets provincial and federal regulations and minimizes potential impacts.

The statement of intent and shopping list of facilities is no substitute for actual descriptions of the proposed facilities. Will the work camp accommodate 100 or 1,000 workers? Will it include a medical facility with airlift capability (must it comply with any Federal or Provincial regulation?), machine shop, storage yard and boneyard, and extensive sleeping quarters? Some of these facilities require level ground: where will these facilities be located and what will be their footprint? If most of the flat ground is located in valley bottoms, what problems arise from building a small, temporary town by a river side?

What about the staging areas? Where will they be located and what will their footprint be? Will they fragment valuable habitat in a manner that, cumulatively, has a greater impact than could be predicted from considering each staging area individually? Saying that they will be "managed in a manner that meets provincial and federal regulations and minimizes potential impacts" cannot substitute for actually describing these areas.

In a report by the *Globe and Mail*, dated November 25, 2008, Plutonic Power Corporation Vice-Chair and CEO Donald McInnes is quoted as saying:

Today's submission [of the Bute Inlet and Toba Hydroelectric Projects] is the culmination of four years of planning, engineering, consultation, permitting and licensing.

In view of the fact that planning for the Bute project has been under way for four years, it is inconceivable that the project should be so vague and incompletely described.

We submit that the omissions in the Project Description noted above (and others) are so substantive as to preclude any full and proper consideration of concerns to include in the Terms of Reference. It is our opinion that the review process should be halted until a revised, complete Project Description is submitted by the proponents.

Cumulative Impact Analysis and the East Toba/Montrose Project

Presented below is a short discussion about decisions made during the provincially led Environmental Assessment for Plutonic's East Toba/Montrose project. Federal "responsible authorities" participated in this joint review at the "screening" level of assessment. In our opinion, the cumulative impact analysis for this project was deeply flawed and we hope that the mistakes made will not be repeated during the Bute project assessment.

The Cumulative Impact Analysis for this earlier project assumed that "baseline conditions" would be synonymous with current conditions. In other words, under this assumption, the cumulative impacts of past industrial uses were not accounted for even though previous industrial activity (primarily logging) had severely damaged the region's most significant assets

(fish and wildlife). Future impacts from forestry were not considered, either, despite the fact that timber harvesting will probably continue as the region's most significant economic activity.

As well, there was no consideration given to the fact that Plutonic was actively planning for numerous other hydroelectric projects in the area. These other projects were dismissed by the working group as "speculative". However, the additional projects were not speculative. We note that after less than three years these "speculative" projects are now coming up for environmental impact assessment. This is a strong indication that the environmental impact assessment for the East Toba/Montrose project, completed only two years ago, is already antiquated and obsolete. That the BC EAO's working group did not consider the potential impacts of these other projects is disturbing and does not engender confidence in a BC EAO-led process.

There are other disturbing implications for the region's fish and wildlife stemming from these assumptions. For example, how can impacts to salmon stocks from hydroelectric development possibly be understood if the impacts of previous industrial activity are not assessed? The same question arises in regard to a significant number of other at-risk species such as Marbled Murrelet, Mountain Goat and Grizzly Bear that have been severely impacted by industrial activity.

In our opinion, the working group, with federal representatives participating at the "screening" level, acquiesced to decisions that circumvented the fundamental values of the *Canadian Environmental Assessment Act*. An environmental assessment at the level of Full Panel Review at least offers the potential that all past and future impacts of industrial activity will be considered in the course of determining whether or not additional environmental impacts of this particular project are acceptable. Our Association fully concurs with and supports the recommendations of responsible authorities (Transport Canada, Fisheries and Oceans Canada and Indian and Northern Affairs) that Plutonic's Bute Inlet project be subjected to a Full Panel Review.

We also wish to note that the issue of the need for the project was not given anything more than a cursory examination in the BC EAO's environmental assessment for the East Toba/Montrose project. This is a major issue for us and all Canadians; for what purpose is the Bute project needed? A thorough analysis of the need for the project cannot be accomplished under the auspices of the BC EAO. However, answering the question of need is a fundamental task under CEAA and could be thoroughly considered under a Full Panel Review. Again, we believe that Canadians have a right to know what the potential impacts are and whether or not the need for the project is sufficient to justify those potential impacts.

Potential Effects That Need to be Recognized in the Terms of Reference for a Full Panel Review

Fisheries

The Homathko, Southgate and Orford rivers are among the largest and most productive salmon supporting rivers in the Sunshine Coast Forest District. Fish from these watersheds once supported a vibrant industry that employed thousands of people and delivered thousands of tons of food to market every year. Unfortunately, these watersheds have been substantially degraded by past industrial activity and the numbers of fish have declined radically. A vastly reduced commercial and sport fishery exists today. Most historic runs are still represented, which indicates that there is a strong potential for stocks to eventually recover to near historic levels. With proper management and timely remediation it is possible that Bute Inlet rivers could again offer substantial benefits to our environment, economy and culture. Impacts from hydroelectric development must not be allowed compromise the full potential fish-producing benefits of the Bute's watersheds.

On the question of base line conditions of the fishery, against which project impacts will be measured, we suggest that the condition of these rivers at the time that Indian Reserves were established, is the appropriate standard for understanding baseline conditions. These dates also confirm the Crown's recognition of First Nation right and privilege to the fishery resource.

In the course of considering what new impacts from hydroelectric development might be acceptable, we need to fully understand in a technical and quantitative way what the impacts have been from previous resource use. The level of hydrological recovery needs to be assessed for each sub-basin of the Homathko, Southgate and Orford watersheds. A hydrological cumulative effects analysis should identify all sources of sedimentation, as well as the condition of every road and all drainage structures within the watersheds. Terrain stability mapping is also key to understanding past and potential impacts.

Further to understanding and avoiding potential impacts to fisheries, there are three areas of environmental consideration that need to be addressed explicitly in the terms of reference. The first relates to the movement within these watersheds of the *gravel fractions* that provide the substrata of spawning habitat; the gravel budget of the system. Obviously no one wants to tolerate spawning beds smothered in silt, but it is equally important that the system delivers enough appropriate material to replenish and maintain spawning beds and rearing habitat of the four salmon species, as well as that of sea-run and resident Cutthroat, Steelhead, indigenous Rainbow and Dolly Varden trout. Each of these species requires distinct spawning substrata and other environmental conditions. The proponents need to state in the Terms of Reference how impacts to the gravel regime of the system will be assessed and mitigated.

Secondly, the *nutrient regime* of the system is a limiting factor in the overall productivity of these watersheds. Stream reaches above identified fish habitat play a critical role in providing the nutrient input that supports micro and macrobiotic life everywhere in the system. Micro and macrobiotic life, in turn, support the life cycles of the larger vertebrate species, most importantly the fish. How do the proponents intend to assess the impacts of the project, which includes 17 power generating facilities and associated points of diversion, on the nutrient regime of the system? The Terms of Reference should deal explicitly with the assessment of impacts to the nutrient regimes of the Homathko, Southgate and Orford watersheds.

Thirdly, *water temperatures* have a major impact on the productivity of these watersheds in terms of nutrient cycling, abundance of micro and macrobiota and the actual survival and spawning capacity of fish species. In our view, water temperature regime impacts need to be much more explicitly addressed in the Terms of Reference. The blue-listed Dolly Varden, for example, has an especially limited tolerance for water temperature fluctuation. How do the proponents intend to assess the impacts of the project on water temperature regimes?

We also wish to note that CEO Donald McInnes' comments at a public meeting, to the effect that there would not be any diversion of fish-bearing waterways, do not inspire confidence. Stream reaches immediately above fish-bearing habitat are also considered to be fish habitat. Damages to these immediately upstream reaches are considered to be HADDs (Harmful Alteration, Disturbance or Destruction of fish habitat) and are subject to prosecution under the *Fisheries Act*.

In devising appropriate fish-related studies for the Bute Terms of Reference, it is important to be aware that there is considerable documentation of the public's awareness and concern about the decline of Pacific salmon fisheries. The Pacific Fisheries Resources Conservation Council, for example, has been consulting with coastal communities for some time now. The results of their recent consultation in Sechelt are available as are comments from many coastal communities (<http://www.fish.bc.ca>, <http://www.fish.bc.ca>). These consultations, and many others, strongly indicate that people are seeing the decline of fisheries in their communities and that they are greatly concerned and find it completely unacceptable. Hydroelectric developers need to be aware that the public is not willing to tolerate any more impacts to the Pacific fisheries resource.

Forestry

The Terms of Reference for the Bute project should consider both past and future environmental impacts of the dominant resource user (industrial forestry) in order to establish what new impacts may or may not be acceptable. The impacts of logging on the fisheries resource have been extreme. The *Forest Practice Code Act* of BC was not implemented until 1994. Prior to 1994 an ineffective voluntary regime for fish and wildlife management was in place. Damages to

fish habitat that accumulated before 1994 were quite dramatic. Forest Renewal BC was established in the mid-nineties and it began making substantial investments in watershed assessment, stabilization and road deactivation. The Terms of Reference for the Bute project should specify a review of the work carried out under this program in the project area. This would provide invaluable information for determining how to continue mitigation such that future impacts from the new land use (hydroelectric power generation) can be minimized. The current situation, which was candidly described by CEO Donald McInnes in the public open houses, is that there is a rapidly deteriorating, sometimes abandoned, industrial drainage infrastructure in the watersheds of the three affected rivers. This situation needs to be fully evaluated if future impacts to fisheries and wildlife values from forestry and hydroelectric generation are to be adequately understood.

Species-At-Risk Conservation

There are a number of species and plant communities present in the project area that are considered to be at risk by the province's Conservation Data Center (CDC) and the federally mandated Committee on the Status of Endangered Wildlife in Canada (COSEWIC).

According to federal MAMU Recovery Team, the Marbled Murrelet is *Threatened* and imperiled due to a lack of nesting habitat. It has been placed under the protections of the *Species-At-Risk Act* (SARA). It is an offence under the *Act* to kill, take or harass the bird or disturb its residence. Even an accidental kill or impact to its nesting habitat is an offence under SARA, unless a permit for such is obtained. Radar surveys indicate conclusively that there are relatively large populations nesting in the Homathko, Southgate and Orford watersheds. By way of contrast, the murrelet has almost entirely disappeared in about 1/3rd of the landscape units of the Forest District, which makes the Bute populations an important asset.

A Ministerial Order under the *Forest and Range Practices Act* protects all Marbled Murrelet nesting habitat occurring in the non-timber harvesting land base. This is not very effective because it is the logging companies themselves that have been authorized to determine what is timber-harvesting land base and what is non-timber harvesting land base. Logging companies also have a virtual veto over WHA designation. Some murrelet habitat is protected in Old Growth Management Areas (OGMA) and there are some Wildlife Habitat Areas (WHAs) established for murrelets as well. These designations and the Ministerial Order do not apply to land needed for hydroelectric development or transmission line construction.

The cumulative impact of the Bute and Toba projects (and projects of several other companies) on Marbled Murrelet populations should be examined rigorously and with great care. Although Bute and Toba Inlets have comparatively large murrelet populations, a prudent approach is warranted for this analysis because murrelet populations are in decline and because there

remains substantial uncertainty about how this species will be protected from wide-spread extirpation.

Quoting from the designated Homathko Landscape Unit Plan:

Of 14 areas identified in the Homathko Landscape Unit as having high MAMU nesting habitat suitability by MELP (BC Minister of Environment, Lands, and Parks), only 3 have been partially or completely included in (designated) Old Growth Management Areas (OGMA) due to policy constraints requiring OGMA delineation to occur within the non-contributing land base. Remnant stands in areas currently approved for timber harvesting were not included in OGMA, as the high fragmentation of these areas reduces the suitability for MAMU nesting habitat.

Thus, provincial policy constraints have already created unfavourable conditions for Bute Inlet Marbled Murrelet populations. Any impact from the Bute project may contribute additively or synergistically to these stressed conditions. Limiting considerations of potential impacts to those from transmission lines (as in the East Toba and Upper Toba assessments) is neither conservative nor prudent. The proponent must determine unequivocally that human activity during construction and operation will not impact murrelet populations during the inland period of their life cycle (May – August).

For the purposes of the Terms of Reference, it must be assumed that there is basically no protection established for the Marbled Murrelet. Therefore, the Terms of Reference for this project should detail how the project will achieve zero impact to the highly precarious murrelet populations of Bute Inlet.

Another species of considerable public, conservation and scientific concern is the Grizzly Bear. Plutonic's Bute proposal is situated primarily in grizzly habitat and may have a large impact on grizzly population, as this species is known to be highly sensitive to human-caused disturbance. Very little is known about the Bute grizzly population. Genetic testing has been completed throughout the central and north coast regions but has not been undertaken in the Bute area. An investment needs to be made to better understand the nature and dynamics of this population before attempting to quantify potential impacts from hydroelectric development. The Terms of Reference for the Full Panel Review should specify that, at the very least, genetic testing of the grizzly population should take place before impacts are considered.

The Mountain Goat is another species of management concern. Ungulate Winter Range has been a traditionally recognized value in British Columbia. The life cycle of the Mountain Goat is fairly well understood. In addition to winter ranges, the animal needs to be free of disturbance during the natal and rearing seasons of the year. Unfortunately, winter ranges for Mountain Goat

have been left undesignated since 1998 and there are no binding regulations limiting disturbance of natal/rearing areas at this time. It is known that the Bute headwaters areas support a significant population of goats. The Terms of Reference should specify how the proponent intends to determine what the needs of this population are and how the effects of development on this population will be minimized.

In general, we feel that it is appropriate for the proponents to make a significant contribution to the province's body of knowledge about these species. They are the new user on the land base and the public needs to know what resources will be placed at risk. The proponent needs to understand, in technically correct scientific terms, what must be accomplished in order to minimize impacts and adequately manage this resource.

Wilderness Values

There is a strong sense that this large-scale project will erode the "wildness" of the entire region. By wildness, we refer to the sense of identity that British Columbians have about their place, quite apart from any ecological consideration. This is strongly expressed in, among others, a public submission to the BC EAO by Peter I. Miles about this project:

During my 50 years in BC I have watched the continual destruction of vital habitat for fish and wildlife. I have witnessed from my aircraft the destruction of so many watersheds that I have lost count. I have seen fish farms spring up in abundance and watched the wild salmon and all that depend on it, wither and die.... The scale and scope of the proposed projects will destroy these rivers that are the home to huge salmon runs as well as the healthiest populations of coastal cutthroat that I know of. I am adamantly opposed to these projects and I look forward to the upcoming public hearings so that my opinions can be publicly expressed.

The Bute headwaters region is recognized for its large salmon runs and large animal populations such as Grizzly Bears, Mountain Goats, Elk, etc. There is a sense that such a large-scale project will desecrate the area, and this engenders strong, passionate reactions. It is a sense that our very identity is being assaulted.

There is no single Term of Reference that can adequately address this intangible but none-the-less real and widespread feeling. This further supports our opinion that the project should be subject to a Full Panel Review process with the panel appointed by the Federal Minister of the Environment. Canadians have the right to be assured that if this project is allowed to go forward, it will be demonstrably necessary for the welfare of and in the interests of all Canadians.

Thank you for your consideration.

Yours truly,

Daniel Bouman, Executive Director

Sunshine Coast Conservation Association