

First Technical Comments for the Proposed Coastal Gas Link Application

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We thank you for the opportunity to provide comments on the Coastal Gas Link Environmental Assessment application. The comments below reference specific pages and lines in the “Application for an Environmental Assessment Certificate” submitted for the Coastal GasLink Pipeline Project, dated March 2014.

Section 12: Economy; Value Component: Economy

Page	Line	Comment
12	12-1 to 12-81	<p>While Northern Health does not specialize in economics, the economy is an important socio-economic determinant of health and as such, we would like to note the following:</p> <ul style="list-style-type: none"> • Income distribution and income inequities are an important socio-economic indicator of health. To fully assess the impacts on community resilience, the impacts to income distribution and income inequities should be discussed. • Northern Health is aware of a “Human Economic Hardship” Index and wonders why this was not used in the economic assessment • Northern Health is aware of literature that provides information on impacts experienced by communities (including economic impacts) that experience a large influx of transient workers or are/have been impacted by boom/bust type resource development activities. It would be our expectation that the Effects Assessment provides reference to this type of literature to identify the likely impacts that may result from this project, which in our experience go beyond those identified in the effects assessment. For instance, it is our understanding that increases in average wages and influx in population can lead to increased costs of goods, services and accommodations which can significantly impact the marginalized populations. This is especially true when considering the cumulative impacts of this project in the context of the current and anticipated increase in economic activity for the region. Please ensure that these potential impact are identified in the Economy section and carried forward to the Community Quality of Life section, if applicable.
12.5.2	20	<p>Coastal Gas Link indicates that with the application of the identified mitigation, no potential residual adverse effects have been identified. We feel that for this statement to be accurate, it would need to be backed by evidence. Our experience and understanding suggests that this may not be accurate, especially when considering the cumulative impacts of this project</p>

		in the context of the current and anticipated economic activity for this region.
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Section 15: Community and Regional Infrastructure and Services; Health Care Services and Social Services; Valued Component: Health Services

** Please note: Northern Health comments are specific to Northern Health services and facilities.

Page	Line	Comment
15-9	Table 15-3	Please note that firefighters (e.g. in Fort St. John) are not first responders to medical calls.
15-11	Table 15-4	Please provide more details on the Moberly Lake Fire Department. For the West Moberly First Nations, the distance to Chetwynd for fire services should be noted.
15-16	28	Please note that Northern Health is not the sole provider of health care services in Northern BC. For instance, health care facilities that service aboriginal communities are generally provided by the First Nation Health Authority while medical and health services can also be provided by private clinics and specialists.
15-16	37	In addition to the concerns identified, please note that Northern Health's funding allocation is based on permanent residents and does not include funding for the temporary workforce/shadow population. Given that primary care resources for the resident population are already at capacity in many communities (e.g. the recent closure of the walk-in clinic at the Fort St. John Medical Clinic and the closure of the Taylor Medical Clinic exemplifies these capacity concerns), Northern Health would be looking to companies to provide on-site primary and preventative care services (for both physical and mental health) to their temporary workforce.
15-17	2	The concern also centres around temporary workforce seeking primary care in emergency room departments and/or walk-in clinic type facilities which are generally already at capacity. As above, Northern Health would be looking to companies to provide on-site primary and preventative care to their temporary workers.
15-17	12-13	Please note that prior communication has indicated a shortage of medical personnel. Because of this, Northern Health would expect that mitigation strategies for impacts to services would go beyond communication with medical service providers to Coastal Gas Link providing primary care services on-site.
15-17	8-18	Please detail the type of medical care that would be available in the field and at work camps. Northern Health would like to see proponents use a model similar to the one being utilized at the Kitimat Modernization Project and currently under development for at least one pipeline project in the region. This model includes: <ul style="list-style-type: none"> • On site primary and preventative care for the temporary workforce by

		<p>on-site nurse practitioners and/or advance care paramedics with physician oversight. This would include such things as first line antibiotics, prescription renewals, suturing, immunization clinics, health promotion, mental health/counselling, etc.</p> <ul style="list-style-type: none"> • Collaboration with existing service and emergency providers to ensure that the needs of the transient workforce are being met without compromising the needs of the resident population
15-17	Table 15-7	<p>There are numerous inaccuracies and inconsistencies in this table. For instance:</p> <ul style="list-style-type: none"> • In some rows certain detail is provided while it is not in others (e.g. the available physicians, availability of pharmacy services, etc.); • The number of beds listed do not align with the number of beds on our records; • Services listed under each Medical Facility appear to be inconsistent and do not align with our records; • The Taylor Medical Clinic recently closed due to physician shortages. The Fort St. John Regional Hospital and Fort St. John Hospital and Health Centre are the same facility called the Fort St. John Hospital. • Etc. <p>Available number of beds/stretchers/physicians/etc. often cannot be easily summarized and/or changes continuously. Overall, we do not think baseline information down to specific number of beds/stretchers/physicians/etc. is necessary/useful to assess the impacts of the project, especially since Northern Health’s funding allocation is based on the resident population only and therefore available primary care services to the temporary workforce can be assumed to be zero.</p> <p>Please see attached PDF for service level summary.</p> <p>Better baseline indicator for health service impacts would have been:</p> <ul style="list-style-type: none"> • An identification of existing service capacity challenges experienced in the LSA, especially as it relates to impacts from resource development and the shadow population; • A review of available literature associated with similar past and current resource development projects (locally, nationally and globally) which could act as baseline knowledge to help identify the likely impacts to health services
15-21	9	<p>Coastal Gas Link notes that the “workforce of the proposed Project would increase pressure on support programs in some of the communities”. Please detail what is meant by “some” (e.g. which communities and what level of pressures would be faced). It is our current understanding that these pressures would be faced by most communities impacted by the project.</p>
15-21	9, 19	<p>As with health care services, Northern Health would be looking for companies to provide on-site care for mental health treatment and prevention as these</p>

		services are generally at capacity and resource allocation is based on resident population.
15-21	16	The application notes that Coastal Gas Link has not confirmed the provision of social support services in construction camp. Can you please elaborate on this sentence? Please note that Northern Health’s resource allocations currently do not include resources for the temporary workforce and as such, we would be looking to companies to think about providing these services on-site.
15-21	Table 15-9	Noted available services do not align with our records. For instance, for several communities where it is noted that Drug or Alcohol Clinics, Counselling Programs are available, these are only available as part of the Mental Health and Addiction services; Mental Health and Addiction services are not available in Hudson Hope (they are referred to Fort St. John), and social workers in Fort St. John and Dawson Creek are only available as part of other services.
15-42	Table 15-18 and page 1-52-33	<p>We would expect that the effects assessment for ‘Health Services’ provides details on the types of expected effects. The type of information that would be useful in identifying the magnitude of impacts would include:</p> <ul style="list-style-type: none"> • The numbers of workers expected to work on the project (while this may be provided in other sections, it would be pertinent to re-summarize this information in this section in the context of health service utilization); • Whether these workers are expected to originate from within or outside of Northern Health (this type of information would be considered useful as the current funding structure for Northern Health is based on resident population); • Where work camps will be located (in the vicinity of which health service centre and for what period of time) • The expected demographic and health care status of these workers • The type of health services that these workers would access and how often access to these services would occur. It is our expectation that this information may be available through literature searches, from Coastal Gas Link’s previous project experience (e.g. accident reports, absenteeism data, etc.), surveys and dialogues with employees in the pipeline industry, academic literature review, in depth discussions with appropriate Northern Health representatives, etc. • The proposed work shifts and how these may impact when and how often health care services will be accessed; • The project’s impacts on the socio-economic determinants of health and how and to what extent these impacts are expected to impact the demands on health services
15-52	27	The application notes that “Many...facilities and services do not expect capacity challenges due to an increase in a temporary workforce, as they are adequately staffed and could handle additional usage”. We do not agree with

		<p>this statement. Health care generally runs at very high capacity almost all of the time and primary care access is and has been a concern in rural remote areas. Capacity challenges have recently been exemplified by the closure of Taylor Medical Centre and the walk-in clinic at the Fort St. John Medical Clinic.</p>
15-52	31	<p>The application notes that municipal representatives expressed concerns about the Chetwynd and Mills Memorial Hospitals. Please note that Northern Health representatives would be a better reference to provide information on capacity. As noted above, generally health care runs at high capacity and many hospitals in the LSA, including the Bulkley Valley District Hospital, Dawson Creek and District Hospital, Fort St. John Hospital, Kitimat Hospital, Mills Memorial Hospital, St. John Hospital, St. John Hospital, University Hospital of Northern BC have approached or experienced full capacity over the last 5 years.</p>
15-52	36	<p>The application notes that medical personnel will be available in the camp. Please detail the type of medical personnel that will be available and the services they will provide to workers.</p>
15-53	4	<p>Please note that Northern Health would be looking to proponents to provide day-to-day medical needs to their workers</p>
15-53	15	<p>Please detail the likely accident/malfunction rates that require off-site medical treatment based on past accident reports and Work Safe claims.</p>
15-53	29	<p>Please note that the ERP, should include notifying the Medical Health Officer of an emergency that has the potential to impact public health or result in a significant impact to hospital/health services.</p>
15-53	29	<p>Please note that Northern Health would expect the proponent to develop and implement a Health and Medical Plan (in consultation with Northern Health) which details the level of on-site primary, first aid and preventative care that will be received as well protocols to minimize and manage disease outbreaks.</p>
15-52-54 and Table 15-18		<p>We would like the proponent to provide more detail in this section and to “identify and analyze all technically and economically feasible mitigation measures” as per Section 3.6 of the AIR. Information that we feel should be included in this section is as follows:</p> <ul style="list-style-type: none"> • Detail on the medical and social service personnel that will be available at the Site and how these compare to best management practices used and/or proposed by others in the industry (locally and internationally). As noted previously, Northern Health’s resource allocations do not include funding for the temporary workforce and therefore, Northern Health would be looking to companies to think about providing their own preventative and primary care (for both physical and mental health) to their workers (e.g. first line antibiotics, suturing, immunizations, health programs, etc). Northern Health is aware that this type of model being used by the Kitimat Modernization Project and is currently under development by at least one BC pipeline project; • Evidence-based information (if available) on the likely effectiveness

		<p>of the proposed mitigation strategies;</p> <ul style="list-style-type: none"> • Further information on the level of communication, collaboration and potential partnerships with health service and emergency providers to ensure health care and emergency response services are provided to workers while not compromising these services for residents; • The development of a Health and Medical Plan (developed in consultation with Northern Health; a preliminary copy of which could/should be included as an appendix) which details the level of preventative care and primary care for physical and mental health that will be met by the proponent. This Health and Medical Plan should also include outbreak prevention and management protocols, including information such as: <ul style="list-style-type: none"> - measures in place to prevent communicable outbreaks, protocols that will be adhered to in the event of an outbreak, contact information for persons responsible for carrying out the protocol, communication protocols with local service providers and notification requirements, etc. • Information on how induced health care impacts (due to socio-economic impacts on resident populations) can and will be mitigated.
15-54	9	<p>Context: The application notes that the project “will interact with infrastructure and services in communities that have a long history of supporting resource-based activities” and “have previously accommodated the needs of an industrial workforce and are therefore considered to be resilient to short-term increases in service demands” For health care services, we would be looking for evidence that supports this statement as it does not align with our current understanding of health care demands. We believe that past, current and expected demands on the health care system resulting from resource development activities and/or boom/bust cycles may have resulted in additional vulnerabilities and demands on the system, potentially rendering them less able to adapt to additional pressures. This is especially true when considering the cumulative impacts of this project and the many planned and current projects that are placing or expected to place pressures on health care services within Northern Health.</p>
15-54	23	<p>Frequency: Please provide evidence on which the conclusion “accidental and isolated” is based on?</p>
15-54	26	<p>Magnitude: Based on the information provided, we do not agree with the statement “there is no effect on the social environment beyond that of an inconvenience”.</p>
15-55	3	<p>As noted previously. Northern Health is not resourced to provide these types of services to the temporary workforce and would be looking to proponents to provide these services on site and in collaboration/partnership with Northern Health.</p>
15-55	13	<p>As with health care services, social services provided by Northern Health are</p>

		generally at capacity at most locations and are not set up to accommodate a shadow population.
15-55	34	Context: As with health services, we do not agree with the statement that because communities have previously accommodated the needs of an industrial workforce, they are considered to be resilient to short-term increases in services. As noted above, past, current and expected demands on the system and boom/bust cycles resulting from resource development activities may result in additional vulnerabilities and demands on the system, potentially rendering them less able to adapt to additional pressures.
15-34	31	The application notes that counsellors will be available on site. Please provide details and include this information in Table 15-18 under “mitigation”
Section 15-1 to 95		Impacts to Health Services, Emergency Services and Social Services. Through the application, impacts on the above-noted services appear to be limited to the direct impacts from the temporary workforce. Based on our understanding, boom-bust, resource development projects also have the ability to impact the socio-economic determinants of health (income inequities, availability of adequate housing, drug and alcohol use, domestic violence, etc.) within the communities which can impact health and social service needs. Please provide details of how this project (especially in light of the cumulative impacts of the various projects anticipated or occurring in the region) may impact the socio-economic determinants of health in the communities within the LSA and how these may impact health and social service levels throughout the boom/bust life cycle of the project.
15-61	11-29	Northern Health does not agree with the determination of impacts to Health Services and Social Services being “not significant” especially in light of the current proposed mitigation strategies and follow up program, the existing challenges faced by the health care sector and the cumulative impacts from existing and proposed projects for this region.
Appendix 3-A		Please detail how projects were included or excluded to interact with the Community Utilities and Services and Community Quality of Life LSA and RSA. It is not clear if only project directly located in the LSA/RSA identified were included or also projects that are located outside of the LSA/RSA but whose impacts are experienced within the LSA/RSA. We would argue that all projects that impact the Economy/Employment RSA/LSA would have the potential to impact the Community RSA/LSA as workers for these projects would likely reside and/or seek services from within the RSA/LSA.
15-65	Table 15-21	Additional important projects to mention in the “existing activities” column would be Site C, the proposed LNG facilities, existing and proposed coal and mineral mines, etc.
15-67	Table 15-2	Additional mitigation (in addition to those suggested above) may also include communication and collaboration with other projects expected to interact with the project.
15-69	Table 15-23	Given the current and anticipated projects in the LSA and RSA, it would be pertinent to provide more detail on how the frequency of “isolated” and “accidental to isolated” was reached for the cumulative emergency, health

		care and social services impacts.
15-71	8	As above, we question the comment “many facilities and services do not expect capacity challenges with an increase in a temporary workforce because they are adequately staffed and could handle additional usage” since this does not align with our current understanding of health care service capacities.
15-71	21	As noted previously, Northern Health representatives would be a better reference to provide information on capacity. As noted above, generally health care runs at high capacity and many hospitals in the LSA, including the Bulkley Valley District Hospital, Dawson Creek and District Hospital, St. John Hospital, Fort St. John Hospital, Kitimat Hospital, Mills Memorial Hospital, St. John Hospital, University Hospital of Northern BC have approached or experienced 100% capacity over the last 5 years.
15-72 and 15-73, 74	7-31 and 28-11	<p>Context: As noted previously, we do not agree with the statement that because infrastructure and services in the LSA/RSA have a long history with resource-development activities, they are considered to be resilient to short-term increases in service demands. Given the past, current and foreseen impacts to health and social services in the LSA/RSA these systems may be more vulnerable to pressures.</p> <p>Duration: For social services, please provide justification for “short-term” especially in light of potentially social services that may be required due to impacts on the mental health for community residents associated with the boom/bust nature of the cumulative projects (e.g. loss of employment and opportunities following the “boom” has been cited to result in impacts to social services);</p> <p>Frequency: please provide justification of “accidental to isolated” frequency when considering the cumulative impacts of all of the projects on the health and social services provided in the LSA/RSA as a whole.</p> <p>Reversibility: please provide justification of “short-term” based on the cumulative impacts associated with the various projects that will rely on health and social services as a whole. This should include legacy health service demands arising/remaining as part of the boom/bust nature of the rapid development happening in the RSA/LSA (e.g. mental health concerns associated with job losses following the boom, etc.)</p>
15-76	Table 15-24	Based on information provided in this application, Northern Health is not confident of the significance determination for residual cumulative effects of the proposed project and the recommended follow-up and monitoring, especially in light of the volume of current and anticipated projects for this region. More detail should be provided in the residual cumulative adverse effects that are anticipated (location, type, extent, etc.)

Section 15: Community and Regional Infrastructure and Services; Community Quality of Life
Valued Component: Community Quality of Life

Page	Line	Comment
15-39 and 15-40		For Community Quality of Life, we would expect the proponent to link the results of the social and economic technical reports to the socio-economic determinants of health. We would expect that this section include baseline information on community health indicators such as drug and alcohol use, community cohesion, socio-economic indices, community engagement and volunteerism, children and youth at risk, etc. as well as information on the existing community impacts that have been experienced by communities in the LHA from past and/or existing resource development projects.
Page 15-95	27	Given that community quality of life can be impacted throughout the boom/bust cycle of the project, the assessment should focus on the entire lifespan of the project including how workforce reductions following construction and operations may impact community quality of life.
Page 15-95	Section 15.7	Please further identify how quality of life indicators were chosen and eliminated. In our opinion, the full range of potential quality of life indicators were not assessed and/or identified (e.g. community/social cohesion, family cohesion, impacts from shift work/remote work to family life, youth at risk, children at risk, impacts from economic inequities, drug and alcohol use, level of STIs, etc.). In our view, the assessment would require a review of available literature from similar resource-development projects (from within Canada and internationally) to identify the types of Community Quality of Life impacts that are typically associated with these types of projects.
Page 15-98	1-21	<p>It is not clear whether the identified mitigation will be adequate to significantly reduce the adverse social effects since the potential adverse social effects before and after mitigation appear to be the same in Table 15-32.</p> <p>It does not appear that all technically and economically feasible mitigations measures were considered (e.g. how will impacts to marginalized populations be mitigated?).</p> <p>Please also detail the construction camp policies that will be implemented.</p>
Page 15-102	2	The application notes that the proponent “cannot predict the choices that may be made by individuals as a result of the employment opportunities made available.” While this is true, we argue that proponents can take steps to work with the communities to identify potential solutions that will minimize negative impacts associated with the project.
Page 15-102	20-37	<p>Context: As previously noted, communities that have a long history of supporting resource-based activities and have experienced the influx of population are not necessarily more resilient to impacts. Based on our experience and understanding, boom/bust resource-based communities can be more vulnerable to additional pressures.</p> <p>Duration/frequency/reversibility: Please identify why legacy impacts of boom/bust cycles on the Community Quality of Life were not included in the</p>

		assessment and how this may impact the duration/frequency/reversibility of the impacts.
Page 15-103	23	Context: as above
Page 15-104	Table 15-34	Based on information provided in this application, Northern Health is not confident of the significance determination for residual effects of the proposed project and the adequacy of the recommended follow-up and monitoring. More information should be provided in regards to the type, extent, etc. of the residual adverse social effects simply identified as “change in community quality of life” in the report.
Page 15-106 to 15-113	Section 15.7.7	As in the effects assessment, the cumulative effects assessment does not appear to provide enough detail on the expected cumulative impacts to the Community Quality of Life. It does not look at the wider potential Community Quality of Life indicators noted above and did not provide sufficient rationale or references for the effect characterization, mitigation options, etc.. More evidence-based information should be provided in regards to the type, extent, etc. of the cumulative adverse effects and residual effects that can be expected on the Community Quality of Life as well as a more in-depth discussion of the technically and economically feasible mitigation options available to reduce residual cumulative impacts to as low as reasonably achievable.
		Based on the information provided, Northern Health is not confident in the determination of impacts to Community Quality of Life being “not significant”, especially in light of the volume of current and proposed resource development projects for this region.