Terms of Reference for SLRD Energy Resilience (Peak Oil) Task Force

The Squamish-Lillooet Regional District is embarking on the first regional Energy Resilience (Peak Oil) Task Force in Canada. The Task Force is one component of the SLRD's Climate and Energy Planning process that is aimed at both reducing greenhouse gases and building regional resilience in the face of climate change and peak oil.

The Task Force will bring together knowledgeable residents of the SLRD from a wide variety of sectors in order to generate ideas and formulate solutions that will build resilience.

The Task Force's charge will be:

1. To review current and credible data and information with respect to peak oil and energy production and related societal implications;
2. To seek community and business input on the impacts to various sectors and to propose "actionable" solutions;
3. To develop recommendations to the SLRD Board in 2010 on strategies that the SLRD can take to mitigate the impacts of declining energy supplies in areas including, but not limited to: transportation, tourism, business, energy and infrastructure, housing, food and agriculture, the environment, health care, social service, communications, land use, emergency planning and the delivery of SLRD services.
4. To propose methods of educating the public about this issue in order to create positive behavior change among businesses and residents in order to reduce dependence on fossil fuels.

Principles:

The following principles will be employed by the Task Force:

- Recommendations will be actionable by the SLRD
- Bold ideas will be pursued
- Efforts will be made to refer to the actions and findings of other task forces
- Impacts on the environment, equity and the economy will be taken into account
- An open and inclusive approach that does not foreclose on options will be utilized
- Ensure that recommendations have a positive impact and promote resilience

Membership:

Stakeholders (12-15) representing, but not limited to:

- Energy, infrastructure and utilities

Terms of Reference for SLRD Energy Resilience (Peak Oil) Task Force

- Business and economic development
- The agriculture /food community (including farming, sales and distribution)
- Local environmental groups
- Construction sector
- Transportation sector
- Education sector
- Tourism sector
- Social and emergency services

SLRD Staff (2)

- Planning
- Public Works and Utilities

The SLRD will seek stakeholders within each sector, through targeted invitation based on sectoral and geographic representation, and will seek to have at least 1 stakeholder representative from SLRD Electoral Areas A, B, C and D.

Membership terms will last for the duration of the task force's standing or up to 2 years. A person's membership will cease if 3 consecutive meetings are missed.

Alternates may attend when necessary with voting privileges. Sub-committees and/or work groups will be struck and appointed as needed to address specific topics, issues or questions. Sub-committees will address land use and transportation, food and agriculture, public and social services and overall economic issues.

Chair:
The Committee will have one Chair (from the Planning Department).

Minutes:
A facilitator will compile and circulate minutes to members within seven days of the meeting. Minutes will be included on the SLRD Board meeting agenda for information and any recommendations needing approval would be included in a separate report to the SLRD Board.

Terms of Reference for SLRD Energy Resilience (Peak Oil) Task Force

Reports to:
The SLRD Board of Directors

Frequency of Meetings:
Twice monthly for the first 4 months and at least once monthly thereafter, as needed.
Meetings are to begin in late March, 2010.
Additional working group or sub-committee meetings or phone calls may be scheduled as required but it is likely that their work can be completed during regular meeting times.

Review of Terms of Reference:
To be reviewed annually or on an as-needed basis.

Proposed Timeline:

Proposed meeting dates are noted on Wednesday afternoons as follows :

Meeting 1:	March 31 (10 – 3 meeting)
Meetings 2 and 3:	April 14, 28
Meetings 3 and 4:	May 12, 26
Meetings 5 and 6:	June 9, 23
Meeting 7:	July 7

Future dates may be scheduled, as required.

If the task force agrees, and to reduce the number of required trips, 2 meetings may be consolidated into one longer meeting per month.

Proposed regular meeting times are 4 pm to 6 pm with the inaugural meeting being held between 10 am and 3 pm.

Meeting 1: Inaugural meeting, introductions, review of terms of reference, rules of conduct, presentation by energy expert, global context, video.

Meeting 2: Review of meeting minutes, video, review of overall energy issues, discussion and review of other task force reports, review of next steps and need for further information.

Meeting 3: Review of meeting minutes, short video, brainstorming of issues, group review and discussion of other task force report findings, information sharing, sub-committee break-out sessions and planning.

Meeting 4: Review of meeting minutes, sub-committee updates, group discussion, need for further information, visualization exercise, sub-committee break-out sessions and planning.

Meeting 5: Review of meeting minutes, sub-committee updates, group discussion, need for further information, sub-committee break-out sessions and planning, discussion of next steps and need for further information.

Meeting 6: Review of meeting minutes, sub-committee updates, group discussion, any last ideas or information, submission of findings to the consultant for preparation of the first draft of the task force report. Review of meeting minutes, submission of sub-committee findings to the SLRD and facilitator for preparation of the first draft of the task force report.

Meeting 7: Discussion of the first draft of the task force report.

Implementation and Monitoring

Following completion of the project, planning staff and the SLRD will incorporate action items on their annual work plan.

Why an Energy Task Force?

Problem Defined ***(related Issues and key question)***	***Desired Outcomes (key result if problem is addressed)***
Need to address climate change	Reduced greenhouse gas emissions
Global liquid fuels are facing peak production and will not keep up with demand within the next 5 years.	Strategies in place to address liquid fuel reductions
Regional transportation of people,	Strategies for:

goods and food will be affected by the growing imbalance between supply and demand for liquid fuels	Food security Energy independence Transportation based on efficient and renewable energy sources Building and community design that focuses on energy efficiency and renewable energy sources
Liquid Fuel for heating and electricity will be affected by liquid fuel scarcity	Local energy strategies that allow for independence from the electricity grid
Business instability caused by economic contraction and dependence on fossil fuels	A sustainable and successful business sector
Rising costs, unstable economic circumstances and limited fuel supplies cause social instability	Vulnerable and marginalized populations have a safety net.

Terms of Reference for SLRD Energy Resilience (Peak Oil) Task Force

PEAK OIL – AN OVERVIEW

Peak oil theory was developed by M.King Hubbert, Chief General Geology consultant to Shell Oil. In 1956, he accurately determined that U.S. domestic oil production would peak between 1965 and 1970. Hubbert's predictions were accurate, as U.S. oil production peaked in 1970. After that time, the U.S. became ever more dependent on imported oil. As a result, the U.S. became vulnerable to socio-political upheavals, and was subject to an oil embargo in 1973, characterized by fuel shortages, and skyrocketing oil prices.

The theory that world oil production will reach a peak is the basis for peak oil theory. After the peak, the world will experience a decline in oil supply. World oil supply is finite, therefore decline is unavoidable. Peak oil is said to have occurred when about half or slightly more of the ultimately recoverable oil has been produced. Peak oil does not mean that no more oil exists, but that global production can no longer be maintained or increased. Declining oil production creates an inability for production supply to meet demand and therefore prices increase. This situation is compounded by increasing demand created by a growing world population base.

The theory of peak oil generally applies to peak natural gas (which has a similar production curve), although in the case of natural gas, the peaking time is thought to be later than that of oil. These fuels can in many cases be substituted for each other, and together, they account for close to 70% of the primary energy used in the world. In Canada, natural gas production is close to it's peak, while in the U.S. gas production appears to have already peaked, creating a dependency on imported natural gas that must be liquefied for transport and then re-gasified for distribution.

Some facts about Peak Oil

Predictions about the exact timing of oil and gas peaking vary, however, most researchers predict peaking to occur most certainly before 2020. The date of peak production is important, however, it is more important to begin to plan for the consequence of peak production because it surely will occur sooner than later, and the implications deserve serious consideration.

There are a number of facts that support the imminent peak in world oil production. These include:

Squamish - Lillooet
REGIONAL DISTRICT

Terms of Reference for SLRD Energy Resilience (Peak Oil) Task Force

1. There can be no oil production without discovery. Production follows discovery by between 25 to 40 years.
2. World oil discoveries peaked in 1964 and have been in decline ever since.
3. In the mid-1980's, discoveries fell below production and have continued to fall. The world is now drawing down its reserves. For every barrel of oil found, the world produces and uses 4 to 6 barrels.
4. Hubbert's original model has been updated to show world peaking occurring this decade. Hubbert himself predicted a world peak in production in 2010.
5. There are no more "elephant" or super-giant oil fields left. New discoveries are smaller, more remote, more challenging, deeper and more costly to develop. The easy oil has already been discovered.
6. The world's geology has been extensively mapped and searched using extensive knowledge and technology. Many holes have been drilled. There will be few surprise finds in the future.
7. "Unconventional" oil, including tar sands are very expensive to develop, require massive amounts of natural gas to harvest, and have environmental implications that are unthinkable in terms of climate change, water pollution and ecosystems.
8. OPEC reserve estimates are unreliable because they are the basis for production quotas and there has been a tendency for OPEC member countries to provide inflated estimates, followed by deflated estimates.
9. More and more oil exporting nations are becoming oil importing nations as their production goes into decline.
10. Approximately 2/3 of oil producing nations are in decline, including the U.S., Mexico, the U.K., Norway, Indonesia, etc.
11. At least 2 of the 5 "elephant" fields in the world have peaked and are in decline. This includes Burgan in Kuwait and Cantarell in Mexico, which is in steep decline. There is some evidence that the Saudi Arabian fields are at or near peak.

Terms of Reference for SLRD Energy Resilience (Peak Oil) Task Force

Recommended Reference Books on Energy, Peak Oil and Resilience for Task Force members:

Deffeyes, Kenneth, S., 2004. *Beyond Oil: The View from Hubbert's Peak.* Hill and Wang, New York.

Heinberg, Richard, 2005. *The Party's Over: Oil, War and the Fate of Industrial Societies*. New Society Publishers, Canada.

Hirsch, Robert, 2005. *Peaking of World Oil Production: Impacts, Mitigation, and Risk Management.* Prepared for the U.S. Department of Energy. ***(NOTE: A summary of this report will be provided to the Task Force members prior to the first meeting).***

Hopkins, Rob, 2008. *The Transition Handbook: From Oil Dependency to Local Resilience.* Green Books Ltd, Totnes, UK***. (NOTE: This book will be provided to Task Force members prior to the first meeting).***

Murphy, Pat, 2008. *Plan C: Community Survival Strategies for Peak Oil and Climate Change.* New Society Publishers, Canada.

Rubin, Jeff, 2009. *Why Your World is About to Get a Whole Lot Smaller: Oil and the End of Globalization.* Random House Canada. *(NOTE: this book nicely summarizes many issues).*

Peak Oil Task Force Reports:

Descending the Oil Peak: Navigating the Transition from Oil and Natural Gas: Report of the City of Portland Peak Oil Task Force. March, 2007.

Twin Cities Peak Oil Resource Guide: Information and Ideas for Community Sustainability. The Twin Cities Peak Oil Working Group. June, 2007.

Oil Independent Oakland Action Plan. City of Oakland. February, 2008.

Berkeley Energy Descent 2009-2020: Transitioning to the Post Carbon Era Final Report. April, 2009. Berkeley Oil Independence Task Force.

Terms of Reference for SLRD Energy Resilience (Peak Oil) Task Force

Kinsale 2021: An Energy Descent Action Plan – Version 1.2005. By students of Kinsale Further Education College, Ireland.

Some additional website resources on Peak Oil

www.energybulletin.net

www.theoildrum.com

www.peakoil.net

www.postcarbon.org

www.communitysolution.org

www.wolfatthedoor.org.uk

www.futurescenarios.org