**NOTES FOR OSAKA MEETING, PGC D.4**

**14-15 May, 2014**

**Attendees**

Olga Senina

Jukka Kaijansinkko (14th only)

Paco Freens

Ahmad Reza Sharifi

Ted Williams

Prospects for contractor support of life cycle assessment (LCA) data development and analysis were reviewed, given 8 May discussion of funding support from the U. S. Center for LNG (CLNG). Outcomes from discussions with CLNG representatives on PGC D were discussed and will be summarized on the next conference call scheduled for 27 May.

The report outline was reviewed and expanded to cover “active” sections that can be addressed by writing assignments in advance of contractor support. This expanded outline is posted on the IGU website and includes volunteered writing assignments for active sections. Current general writing assignments are shown on the expanded outline. More detailed sections and requests for contributions will also be shown on the expanded outline, which will be actively maintained.

The base document for all written sections will be maintained on IGU website in the “Study Group Report” folder. Study Group members should update the Microsoft Word version of the base document, showing edits (strike outs and underscored new text), and reasoning for contributions and changes using the “Comment” balloon feature of Word.

**Action:** Additional Study Group members should be solicited from among the following:

* Cheryl Cartwright, Australian Gas Association
* Rob Klein Nagelvoort, independent consult and past Study Group chairman
* Other Australian LNG contacts.

**Action:** Ted will provide the to Study Group background materials from the U. S. Environmental Protection Agency’s document AP42 as an example of emission factor representation of processes. The AP42 example illustrates the use of emission rate-based information for analytical descriptions of emission factors relevant to the Study Group modular approach. The following website illustrates the AP42 approach and its application: <http://www.epa.gov/ttnchie1/ap42/>. Study Group members are encourage to present other technical representative approaches to representing emissions that would be suitable to the modular approach.

**Action:** PGC D.4 should draft a memorandum of agreement (MOA) to be executed with the U. S. Center for LNG (CLNG) for sharing contractor-developed LCA data and Include in MOA the right to cite CLNG-developed comparative analysis of LNG versus other energy forms (expected to include coal-fired and oil-fired power generation).

**Action:** Establish contact with SIGTTO started with World LNG Report interaction. Also, contact Ravi of Rasgas.

**Action:** Olga and Sharifi will begin work on graphics (photos, schematics, and other visual information)to including in report, including the following sources of information and graphics types:

* + Photos, maps, etc., from the “World LNG Report,” 2014 edition
	+ Chain schematics and icons
	+ Process flow block diagrams
	+ Photographs of technologies (all subject to approvals).

**Action:** Jukka will develop template for data archiving and modeling using Excel and Monte Carlo add-in (for probablistic emission factors). Jukka should consult with Max on data template approaches.

**Action:** In written sections, maintain a focus on “already cleaner downstream” of natural gas end use. That way emissions from the LNG chain is not considered in isolation. “Getting the LNG chain right” remains the central focus.

**ACTION:**  Prior to contractor engagement, resolve issues of emissions units per units of activity, such as:

* Liquefaction: gram pollutant/cubic meter LNG
* Transport: gram pollutant/cubic meter LNG
* Regas: gram pollutant/cubic meter LNG
* Include conversions in report; use IGU conversions (cubic meter LNG: cubic meter gas) and include tonnes, cubic feet gas, etc.

Monthly conference calls will be scheduled beginning May 2014 through the end of the project. Study Group members should make every effort to participate on conference calls and adjust schedules according.