

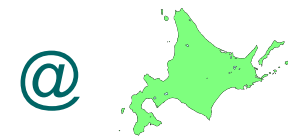
# PGCA Contribution to the IGU Strategic Vision

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Satoshi Yoshida, Chair, PGCA

September 26, 2012



@ 札幌、北海道、日本



Sustainability

team PGCA 2012–2015



PGCA Study Groups



strategic vision; PGCA's contribution

*transversal issues*





Sustainability



# Sustainability

From Wikipedia, the free encyclopedia

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## What is Sustainability?

The word sustainability is derived from the Latin *sustinere* (*tenere*, to hold; *sus*, up). Dictionaries provide more than ten meanings for *sustain*, the main ones being to “maintain”, “support”, or “endure”.<sup>[3][4]</sup> However, since the 1980s *sustainability* has been used more in the sense of human sustainability on planet Earth and this has resulted in the most widely quoted definition of sustainability as a part of the concept sustainable development, that of the Brundtland Commission of the United Nations on March 20, 1987: “sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

# Sustainability

## What is Sustainability?

The world's population of 7 billion is likely to increase to 9 billion by 2050. The demand for diminishing natural resources is growing. Income gaps are widening. Sustainability calls for a decent standard of living for everyone today without compromising the needs of future generations.

This means finding better ways of doing things.

Such as:

- Jobs
- Clean energy
- Water and food
- City ensuring a decent quality of life
- transportation without too much congestion and pollution
- Healthy oceans
- Resilience to natural disasters

Solving these challenges is a start to building the future we want.

[JOBS](#) [ENERGY](#) [WATER](#) [FOOD](#) [CITIES](#) [TRANSPORTATION](#) [OCEANS](#) [DISASTERS](#)



**Sustainable Energy for All** Energy is central to nearly every major challenge and opportunity the world faces today. Be it for jobs, security, climate change, food production or increasing incomes, access to energy for all is essential.

Sustainable energy is opportunity – it transforms lives, economies and the planet.

UN Secretary-General Ban Ki-moon is leading a Sustainable Energy for All initiative to ensure universal access to modern energy services, improve efficiency and increase use of renewable sources.

## Facts and figures

One in five people still lacks access to modern electricity.

3 billion people rely on wood, coal, charcoal or animal waster for cooking and heating.

Energy is the dominant contributor to climate change, accounting for around 60 per cent of total global greenhouse gas emissions.

Reducing the carbon intensity of energy is a key objective in long-term climate goals.

<http://www.un.org/en/sustainablefuture/energy.shtml>

**JOB** **ENERGY** **WATER** **FOOD** **CITIES** **TRANSPORTATION** **OCEANS** **DISASTERS**



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## team PGCA 2012–2015





## team PGCA 2012-2015



Chair: Satoshi Yoshida



, Tokyo Gas, Japan

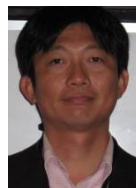
Vice Chair & SG4 Leader: TBD



, Argentina



SG1 Leader: Hiromichi Kameyama



, Tokyo Gas, Japan



**SG2 Leader: Elbert Huijzer**



**Liander, Netherlands**

SG3 Leader: Anne-Prieur-Vernat



GDF SUEZ, France



Secretary: Masao Takekawa



, Tokyo Gas, Japan







# team PGCA 2012-2015

## List of representatives PGCA as of Sept.2012

Name of WOC/ PGC/ TF	SG	Member		Title	Organisation/ Company
		Surname	Name		
PGC A		mostafa	kashkuli		
PGC A	SG A1	Hirokichi	Kameyama	Senior Researcher, Technology Research	Tokyo Gas Co., Ltd.
PGC A		Masao	Takekawa	Deputy Manager, Environmental Affairs	Tokyo Gas Co., Ltd.
PGC A		Satoshi	Yoshida	Special Assistant to General Manager	Tokyo Gas Co., Ltd.
PGC A	SG A3	Yuichiro	Yamaguchi	Manager, Planning Team, CSG &	Osaka Gas Co., Ltd.
PGC A		KIM	Hyo-Sun	Senior Research Engineer	Korea Gas Corporation
PGC A		YOU	Hyun Seok	Senior Research Engineer	Korea Gas Corporation
PGC A	SG A1	Trova Amundsen	Gro Jofrid		Statoil ASA
PGC A	SG A2	Hunsbedt	Kari Lindoe		Statoil ASA
PGC A	SG A1	Majid	Farrukh	CE(HSE)	Southwestern Gas Pipelines
PGC A	SG A2	Kukulska-Zajac	Ewa	PhD	Oil and Gas Institute
PGC A	SG A4	Mróz	Katarzyna	MSc.	Polish Oil and Gas Company (PGNiG SA)
PGC A	SG A1	Sprzaczak	Piotr	MSc.	Ministry of Economy, Oil and Gas Department
PGC A	SG A3	Strzelczak	Marzenna	MSc.	Polish Oil and Gas Company (PGNiG SA)
PGC A		Medic	Dusan	Head of development	JP Srbijagas
PGC A		Zdravkovic	Milan	Director of Development	JP Srbijagas
PGC A	LCA	Estebananz	Fernando	Environment quality & Aud.	Union Fenosa Gas
PGC A	Sustainability & S.E.	Ortiz de Mendibil	Naiara		Spanish Gas Association -SEDIGAS
PGC A	SG A1	Mohamed	Abdelkader		ATPG
PGC A	SG A2	E. (Elbert)	Huijzer	Member ( willing to be Coordinator)	Liandon

Name of WOC/ PGC/ TF	SG	Member		Title	Organisation/ Company
		Surname	Name		
PGC A	SG A1	Hamida	Hakima	HSE Engineer	Sonatrach Activité Aval
PGC A	SG A2	Aissaoui	Radia	Electrical Engineer, Head of project	Sonelgaz CREDEG
PGC A	SG A3	Bessaoud	Rachid	Director of the Technological	Sonatrach Activité Ava
PGC A	SG A4	Abdallah	Souad	Head of HSE Department	Sonatrach Activité Aval
PGC A	SG A2	Stanford	Andrew	Corresponding	Envestra Ltd
PGC A	SG A2	GULLENTOPS	Dirk		SYNERGRID
PGC A	SG A1	Senna Santos Imbuze	Rafael		PETROBRAS
PGC A	SG A2	Scheffer	Milena		PETROBRAS
PGC A	SG A3	da Costa Lenz Cesar	Juliana Maria		PETROBRAS
PGC A	SG A.1	Kinderman Lončarović	Alenka		Energy Institute Hrvoje Požar
PGC A	SG A1	Petr	Buryan		Institut of Chemical Technology Prague
PGC A	SG A1	Soren Hylleberg	Sorensen		HMN Naturgas
PGC A		Siitonen	Sari	Manager, Safety	Gasum Oy
PGC A		Jännes	Antero	Chairman & CEO	Gasum Oy
PGC A		Kauppinen	Hannu	Managing Director	Finnish Gas Association
PGC A	SGA 2	Breco	Claire		GDF SUEZ
PGC A	SGA 1	Copin	Dominique	CO2 Project Manager	TOTAL
PGC A	SGA 1	De Lannoy	Rose		GDF SUEZ
PGC A	SGA 2	Perrin	Marc		GDF SUEZ
PGC A	SGA 3	Prieur-Vernat	Anne		GDF SUEZ
PGC A	SGA 2	Lebovitz	Frédérique		GDF SUEZ
PGC A	SG A1	Sham	Man Fai	General Manager - Production and	The Hong Kong & China Gas Co. Ltd.
PGC A		ahmad	zamani		
PGC A		mohamadreza	yousefipour		



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## PGCA Study Groups



# PGCA Study Group 1

## Carbon Capture and Storage Hiromichi Kameyama, Tokyo Gas, Japan



Based on the “The role of CCS in a sustainable gas industry” report of last triennium,

- showing the different aspects and progress of the ongoing projects,
- suggest the preferred direction for future CCS development in the gas industry.





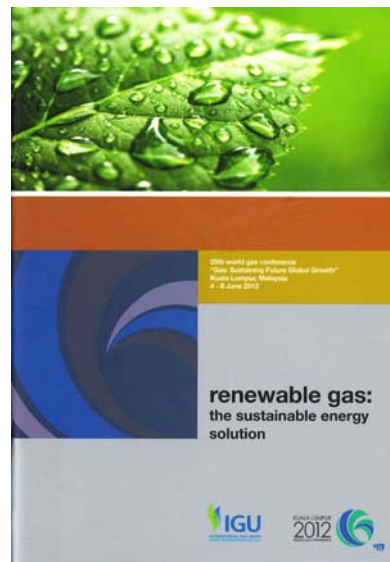
## PGCA Study Group 2

**Natural Gas and Renewable Gas**  
**Elbert Huijzer, Liander, Netherlands**



Based on the “Renewable Gases” report of last triennium,

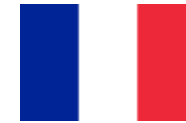
- including off-grid bio-methane projects in developing countries,
- analyze further economic, LCA, and social aspects through case studies,





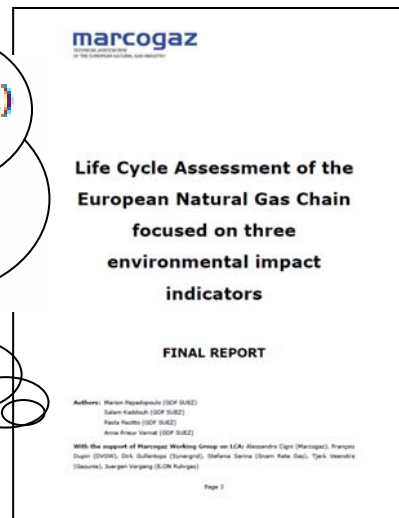
## PGCA Study Group 3

### LCA study of the Natural Gas Chain Anne-Prieur-Vernat, GDF SUEZ, France



- Based on knowledge from the Marcogaz-Eurogas study,
- setting up framework to collect data and build international database,
  - sharing knowledge on LCA methodology within IGU,
  - promote the environmental performances of the natural gas.

**Authors:** Marion Papadopoulos (GDF SUEZ)  
Salam Kaddouh (GDF SUEZ)  
Paola Pacitto (GDF SUEZ)  
Anne Prieur Vernat (GDF SUEZ)



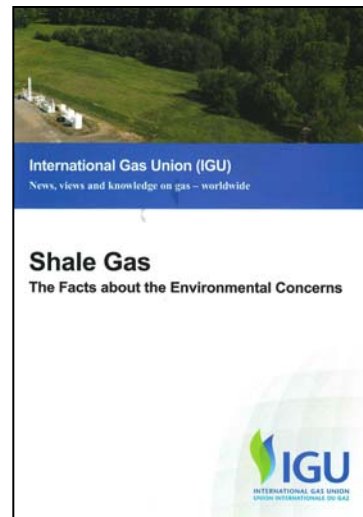


## PGCA Study Group 4

### Environmental Aspects of Unconventional Gas TBD, Argentina



- Capture environmental discussion points  
in the controversy over UG
- Understand the myths and facts of UG
- Collect and document best practices associated  
with UG production



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strategic vision; PGCA's contribution



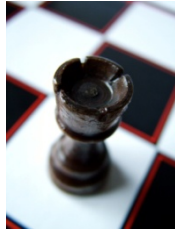




## Strategic vision 2012-2015; the 4 pillars

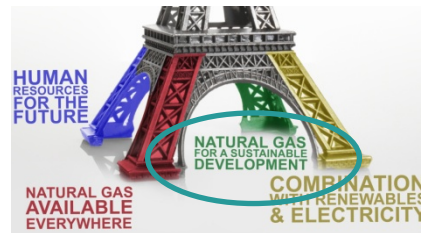






## Strategic Guidelines 1/4

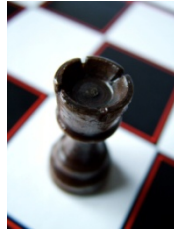
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### NATURAL GAS FOR A SUSTAINABLE DEVELOPMENT(SG1,3)

Bridge/transitional energy to sustainable energy by Carbon Capture and Storage

Demonstration of environmentally benign aspects of the natural gas chain (LCA) will enhance the use of natural gas for securing sustainable development.



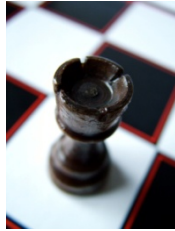
## Strategic Guidelines 2/4



### COMBINATION WITH RENEWABLES & ELECTRICITY(SG2)

Natural Gas can stabilize and/or control the output of energy from unstable renewable sources (eg. PV, wind).

Securing reliability of renewable energies will enhance the use of renewables. Biogas are produced and injected into natural gas pipelines in Europe. Biogas will realize greener gas.



## Strategic Guidelines 3/4

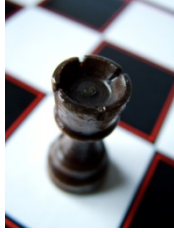


### NATURAL GAS AVAILABLE(SG2, 3)

Bio-methane could be produced from various sources (algae, waste, animal manure etc.)

Off-grid bio-methane projects will supply methane in remote areas where gas pipelines are not available and could be used locally.

Abundant and omnipresent reserve, unconventional gas is expected to make natural gas more available. Environmental impact of UG exploration and production must be carefully examined and monitored in order to secure healthy development of this promising resource.



## Strategic Guidelines 4/4



### Human Resources for the Future(SG1,2,3,4)

Natural gas is the blood of the global economy and will continue to nurture and enrich our lives.

Demonstration of availability, environmental integrity, advanced technologies and will assure solid future of the gas industry and will attract young and bright talent of the future generation.

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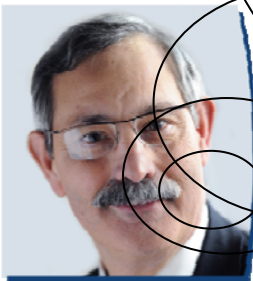
## *transversal issues*



# Don't forget Suggested Transversal Issues!

*“Growing together towards a friendly planet”*

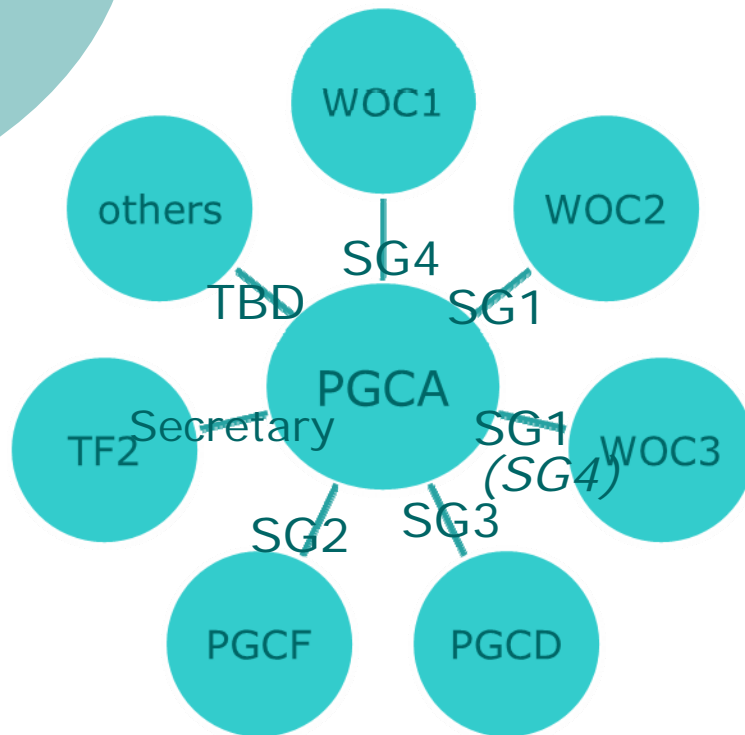
- ✦ A representative from each WOC will participate in TF1 (HR) largely open
- ✦ A representative from each WOC + **PGC A** & D will participate in PGC F (RD&I)
- ✦ A representative from each WOC will participate in **PGC A**
- ✦ TF2 (Gas Advocacy): open to all CC members, participation of at least one Authority from PGC E, **A**, B and WOC 5, + regional coordinators + Secretariat + some experts





## transversal issues

### Representatives to other committees.....



Study Group 1

WOC2 (Storage)/ WOC3(Transmission) ;CCS

Study Group 2

PGCF(RD&I):Renewable & Electricity

Study Group 3

PGCD(LNG);LNG LCA

Study Group 4

WOC1(E&P);UG, WOC3

Secretary

TF2(Gas Advocacy)

Other committees

TBD