

# 26<sup>th</sup> World Gas Conference

1 – 5 June 2015 – Paris, France



PGCE-1

*TS PGCE-1*

## THE “GAS CHAIR” EXPERIENCE

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# The “GAS CHAIR” Experience

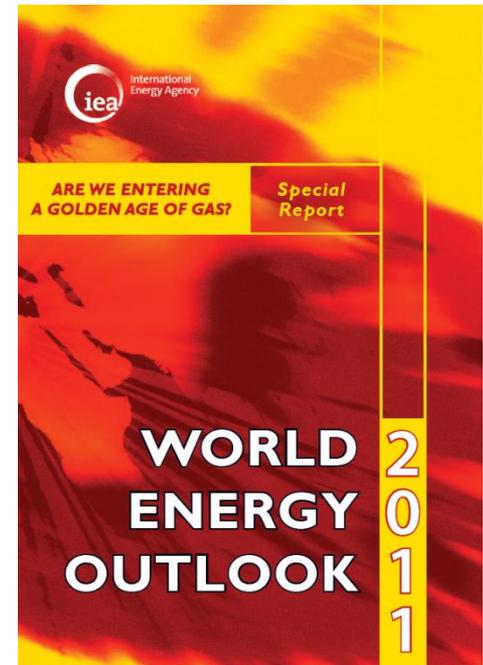
- **PRESENTING A “BUSINESS-GOVERNMENT-UNIVERSITY” PARTNERSHIP TO PROMOTE “RATIONAL AND EFFICIENT” USES FOR GAS (BEYOND GAS-TO-POWER) IN EMERGING COUNTRIES.**
- **PROGRAMME COMMITTEE “E”:** MARKETING AND COMMUNICATION
- **PGCE-1** Additional uses for gas, how do we go beyond gas-to-power?
- How communication initiatives led by a partnership between the Local Distribution Company, **Comgas**, the Local Regulatory Agency, **Arsesp**, and the Institute of Energy and Environment of the University of Sao Paulo, **IEE-USP** helped to promote “rational and efficient” uses of natural gas, beyond gas-to-power, in the State of Sao Paulo, Brazil.

# The “GAS CHAIR” Experience - BACKGROUND

- **BACKGROUND**

# The “GAS CHAIR” Experience - BACKGROUND

- Despite recent major changes in the global energy scenario, the factors that drive natural gas demand and supply still point to a future in which natural gas plays a growing role in the global energy mix.
- Assumptions stated (for example) on IEA’s 2011 WEO Special Report “The Golden Age of Natural Gas” are still valid within the new international energy reality.



# The “GAS CHAIR” Experience - BACKGROUND

- **Our main criticism of** IEA’s pro-gas scenarios focus on two strong ideas with which we do not share entirely.
- These same ideas also frequently appear in several IGU’s referential studies.
- **Idea 1** - The perception that natural gas is a “**transition source of energy**” towards anything else (more sustainable);
- **Idea 2** - The dominant view that the main role for natural gas (mainly in emerging countries) is **GAS FOR POWER GENERATION**.

# The “GAS CHAIR” Experience - BACKGROUND

- In our research at the University of Sao Paulo, we **alternatively** work with the concept of a “**Natural Gas Civilization**”;
- The transition process toward any renewables-based energy mix shall be sufficiently slow and with ample energy diversity to allow us assuming the **natural gas as the main vector of a new global energy model**.
- Designing the Natural Gas Civilization

Natural gas –  
The construction of a new  
civilization

*EDMILSON MOUTINHO DOS SANTOS, MURILO TADEU  
WERNECK FAGÁ, CLARA BONOMI BARUFI &  
PAUL LOUIS POULALLION*

# The “GAS CHAIR” Experience - BACKGROUND

- Developing the Natural Gas Civilization necessarily means to promote additional uses for gas and meet the challenges of “how to go beyond gas-to-power”.
- Particularly in emerging countries (and mostly evident in Brazil) ... building up the Natural Gas Civilization means to promote the **substitution of thermal uses of electricity** (“electrothermy”) **ADOPTING** direct uses of natural gas ...
- ... rather than to produce more power with gas and keep the mix of final energy uses untouched.
- **YET ... among so many other difficulties ... GOING BEYOND GAS-TO-POWER in emerging countries is a challenging MARKETING AND COMMUNICATION issue.**

# The “GAS CHAIR” Experience - AIMS

- AIMS

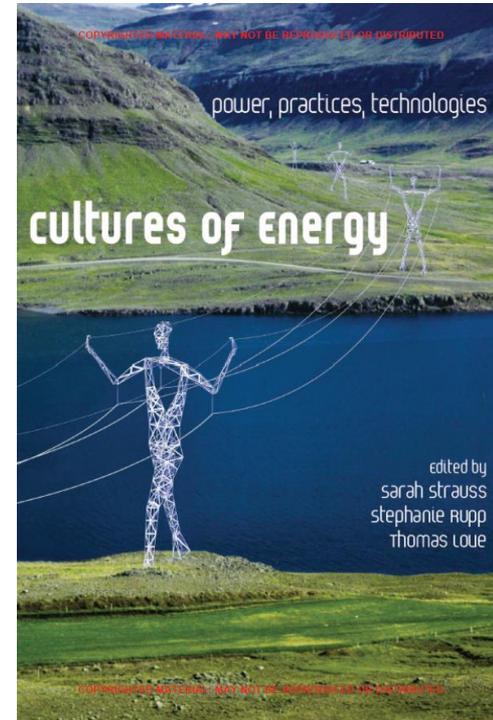
# The “GAS CHAIR” Experience - AIMS

- Presenting the GAS CHAIR;
- A six-years-long communication effort developed in the State of Sao Paulo, Brazil.
- Partnership between Comgas, Arsesp and IEE-USP to promote direct, non-power “rational and efficient” uses of natural gas.
- Multiple actions focused on diversified audiences (professionals, current and potential users as well as the youth in local public and private schools).
- Promote the best practices in natural gas uses as well as to reduce the cultural barriers that make difficult the penetration and diffusion of direct gas uses in an emerging countries like Brazil.



# The “GAS CHAIR” Experience - AIMS

- The Gas Chair is based on a theoretical literature that emphasizes the cultural aspects determining societal final energy uses.
- **Seminar work is Leslie A. White's Theory of Cultural Evolution** (father of cultural anthropology), which focused on the major role of technology and therefore of energy uses to explain cultural evolution and the emerging of new civilizations.
- As stated by Strauss, Rupp and Love (2013), anthropologists as well as any other expert investigating or proposing energy policies and planning must address ENERGY in at least three ways:
  - How people experience and utilize energies of various qualities (types),
  - How we rely on energy quantity and continued flow),
  - and how we harness both qualities and quantities of energy to construct socially meaningful worlds.



# The “GAS CHAIR” Experience - AIMS

- The “Gas Chair” was a unique project derived from a broad understanding that “cultural barriers” cause difficulties for the development of additional uses of gas, beyond of power in the State of Sao Paulo (by far the largest gas market in Brazil)
- Comprehensive and systematic action, focused on different audiences and with the most adequate language.
- Long-term-and-integrated “business-government-university” partnership working together on essential communication efforts to incite the development of a rational and efficient gas market in a country with very low cultural tradition in using gas.
- The experiences promoted by the “Gas Chair” is described as a blueprint for the promotion of direct uses of gas, beyond gas-to-power, in emerging countries, where “cultural motion” and changes in energy traditions and habits are required to favor the adoption of gas by the final consumers.



- METHODS AND RESULTS

# The “GAS CHAIR” Experience - METHODS AND RESULTS

- We present a brief revision of the most outstanding initiatives promoted by the Gas Chair from 2006 to 2013.
- The selected experiences are not presented according to their chronology.
- We summarize some of the activities pointing to the aimed goals as well as the found implementing difficulties.
- The comprehensive and historical list of activities can be found at the Gas Chair website (unfortunately mostly in Portuguese):

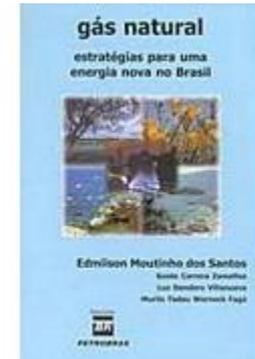
**[catedradogas.iee.usp.br/atividade\\_ant.asp](http://catedradogas.iee.usp.br/atividade_ant.asp)**

- The common challenge in the developed initiatives was to promote the direct uses of gas in substitution of thermal uses of electricity ... A rich-hydropower country like Brazil has developed a long-term tradition of electrothermy (in residential, commercial and industrial energy uses).
- Additional uses of natural gas such as in transportation as well as in cogeneration systems were also boosted.

# The “GAS CHAIR” Experience - METHODS AND RESULTS

## ■ THE GAS LIBRARY

- Comgas having formerly hold the only national library focused on natural gas, which was demobilized after privatization.
- The initial goal was to rebuild a world-class gas-dedicated bibliographical hub at USP. Alternatively, preparing, donating and distributing to libraries basic “Sets of seminal books on natural gas”. Financial resources fell far short to enable those initial plans.
- **Adopted solutions:**
  - Preparing and donating to public libraries from Technical Schools “Standards (ABNT) Sets” (focused on residential and commercial gas installations in Brazil), donating these;
  - Promotion of domestic publications;
  - Digital references of (MSc and PhD thesis).



# The “GAS CHAIR” Experience - METHODS AND RESULTS

## ■ TECHNICAL VISITS

- Promoting free technical visits to outstanding gas users such as Shopping Malls and Commercial Buildings holding gas-fired cogeneration and/or air-cooling systems.
- People including potential users, academics and potential operators are always keen to see real operational units and discuss pros and cons with existing operators and users.
- Technical visits always followed by USP Faculties to respond to specific questions.



CONVITE

A CÁTIEDRA DO GÁS convida para visita técnica à Planta de Cogeração a Gás Natural com Chiller de Absorção da ECOGEN, no Shopping Taboão, e ao seu Centro de Operação.

Local: Rodovia Régis Bittencourt, 2.643  
Taboão da Serra (SP)  
Data: 04/04/2013 (quinta-feira), das 14 às 17 horas.

INSCRIÇÕES GRÁTIS | CLIQUE AQUI

Mais informações, no tel.: (11) 5531-0847 (cf. Cristina)

As inscrições serão efetuadas por ordem de chegada.

**Inscriva-se até 28/03**  
**VAGAS LIMITADAS**

Caso não receba retorno à sua solicitação, contatar: (11) 5531-0847



# The “GAS CHAIR” Experience - METHODS AND RESULTS



## ENCONTRO TÉCNICO DE INSTALAÇÕES DE GASES COMBUSTÍVEIS

3 de junho de 2008

INSCRIÇÃO  
ISENTA  
DE CUSTO  
CLIQUE AQUI

### OBJETIVOS

- Estimular a formação de profissionais para atuar na área de gases combustíveis.
- Contribuir para complementar as atividades já desenvolvidas nas disciplinas afins.
- Entrega da coletânea das normas abaixo relacionadas:

- NBR 15526: Redes de distribuição interna para gases combustíveis em instalações residenciais e comerciais - Projeto e execução  
- NBR 15398: Redes de distribuição para gases combustíveis em instalações comerciais e industriais - Projeto e execução  
- NBR 13103: Instalação de aparelhos a gás para uso residencial - Requisitos dos ambientes  
- NBR 12313: Sistema de combustão - Controle e segurança para utilização de gases combustíveis em processos de baixa e alta temperatura

### ÚBLICO-ALVO

Profissionais do setor de gases combustíveis, da área pública e privada, especialmente das áreas de engenharia de construção civil, arquitetura e projetos, e tecnólogos.

### COORDENAÇÃO TÉCNICA

Murilo Tadeu Werneck Fagã (Coordenador da Cátedra do Gás - Instituto de Eletrotécnica e Energia da USP)

### PROGRAMAÇÃO

Formação de profissionais para os novos desafios tecnológicos que representa o uso de gases combustíveis como energia final nas edificações.

14h00 Credenciamento

14h30 José Carlos Broisler Oliver (Diretor de Operações da Comgás)

15h00 Edmilson dos Santos Moutinho / Murilo Tadeu Werneck Fagã (Coord. da Cátedra do Gás - IEE/USP)

15h30 Valdemar Antônio Demétrio (Presidente em exercício do CREA-SP)

15h50 João Batista Corrêa Nery (Superint. do Comitê Brasileiro de Gases Combustíveis - ABNT/CB-09)

16h10 Eduardo Ioshimoto (Departamento de Engenharia de Construção Civil - Escola Politécnica da USP)

16h30 Entrega das coletâneas aos representantes das Escolas

16h50 Encerramento

### INFORMAÇÕES

**LOCAL:** Centro Operacional da Região Metropolitana de São Paulo da Comgás.  
**END.:** R. Capitão Faustino de Lima, 134 (Metrô D. Pedro II), Brás, São Paulo (SP)  
**TEL.:** (11) 5531-0847 / 5531-4944 (c/ Wilma) **VEJA AQUI COMO CHEGAR**

### APOIADORES



### AGRADECIMENTOS



## ■ DIVERSIFIED TRAINING

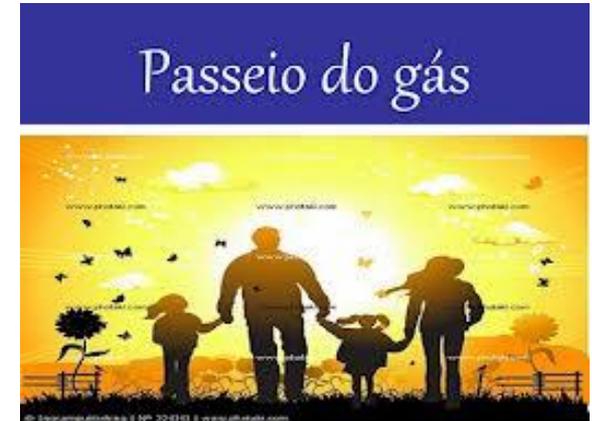
- Promoting free training activities to different audiences and with different scopes.
- **Training to NG Sales Promoters** – Highlighting gas-related positive aspects that might be used by Selling promoters to seduce final consumers on the best practices and highest qualities of natural gas relative to other energy sources. lenges.
- **Technical meetings in frontier cities** in the concession area with industry delegations promoting the pros and cons of a Gas Civilization in Brazil as well as overcoming challenges.



# The “GAS CHAIR” Experience - METHODS AND RESULTS

## ■ THE NATURAL GAS RIDE

- Ludic presentation focused on the youth (adolescence) ...
- USP Faculties present the fundamental of the natural gas industry and gas-related challenges for the future generations.
- Free Lectures brought to Public (peripheral) and Private (outstanding) high schools in Sao Paulo.



# The “GAS CHAIR” Experience - METHODS AND RESULTS

## ■ THEMATIC SCIENTIFIC MEETINGS

- Mobilizing high schools to organize Thematic Scientific Meeting and Exhibition highlighting energy (as a whole) and gas-related issues (in particular).
- Marina's Prize



# The “GAS CHAIR” Experience - METHODS AND RESULTS

## ■ CONGRESS AND SEMINARS PROMOTION

- Organizing domestic and international congresses, seminars and workshops with specific gas-related focuses.
- Academic support for technical lobbying favoring the promotion of direct final uses of gas.
- Comparative analysis and international road mapping in leading gas-related topics.



**GÁS NATURAL**  
**NO TRANSPORTE PÚBLICO**  
Opção energética e sustentável para as cidades brasileiras

**CLIQUE AQUI** | Conheça o gás natural e as possibilidades de aplicação no transporte público

A Câmara de Gás do SP - USP convida você para participar do evento "Gás Natural no Transporte Público: Opção Energética e Sustentável para as Cidades Brasileiras".

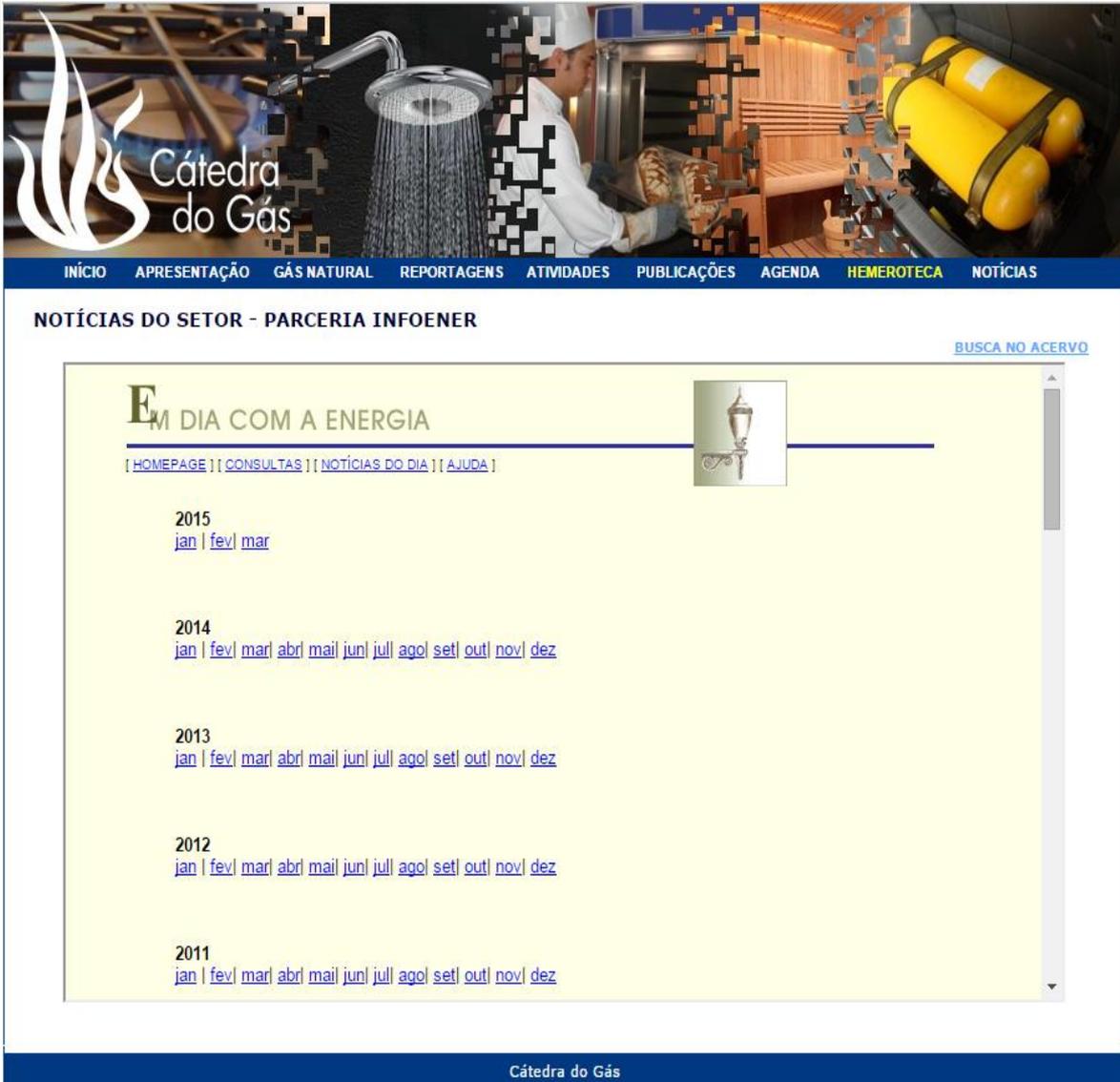
Venha conhecer como o Gás Natural pode ser uma opção no transporte público, através das experiências internacionais e locais de sucesso.

Vamos debater e discutir as possibilidades de uso do Gás Natural no Estado de São Paulo, dentro dos sistemas de gás natural e sustentabilidade.

**Data:** 23 de outubro  
**Horário:** das 14:00 às 17:00  
**Local:** Golden Tower São Paulo Hotel  
**Endereço:** Rua Desce do Lado da Praça, 249 - Pinheiros

Patrocinadores: Apoio Institucional:

# The “GAS CHAIR” Experience - METHODS AND RESULTS



The image shows a screenshot of the 'Cátedra do Gás' website. At the top, there is a banner with a collage of images: a gas flame logo, a shower head, a chef, a sauna, and gas cylinders. Below the banner is a navigation menu with the following items: INÍCIO, APRESENTAÇÃO, GÁS NATURAL, REPORTAGENS, ATIVIDADES, PUBLICAÇÕES, AGENDA, HEMEROTECA, and NOTÍCIAS. The main content area is titled 'NOTÍCIAS DO SETOR - PARCERIA INFOENER' and includes a search bar labeled 'BUSCA NO ACERVO'. The central part of the page features a large heading 'EM DIA COM A ENERGIA' and a small image of a gas lamp. Below this, there is a list of years from 2011 to 2015, each with a list of months (jan, fev, mar, abr, mai, jun, jul, ago, set, out, nov, dez) for navigation. The footer of the page contains the text 'Cátedra do Gás'.

- **NEWSPAPER LIBRARY**
- News collection in energy and natural gas.
- In partnership with INFOENER.

- SUMMARY & CONCLUSIONS

## The “GAS CHAIR” Experience - SUMMARY & CONCLUSIONS

- The “Gas Chair” was a unique project trying to tackle the “cultural barriers” that may cause difficulties for the development of additional uses of gas in the State of Sao Paulo, Brazil.
- The project was not renewed in 2014 and 2015 - Although Comgas and ARSESP still prize the Gas Chair as a great partnership with the University ... new R&D priorities received more support instead.
- We are unable so far to measure the impacts of all the initiatives developed over 6 years in promoting the expansion of gas markets as well as the effectiveness of the Gas Chair in implementing the “gas civilization” in the State of Sao Paulo, Brazil.

## The “GAS CHAIR” Experience - SUMMARY & CONCLUSIONS

- YET ...
- In 2014 –Natural gas received much less attention, was much less spoken and had much less power to mobilize segments of society to discuss specific issues as the Gas Chair used to do.
- Brazil and the state of Sao Paulo are still far away from consolidating a true Gas Civilization and “cultural barriers” still need to be dismantled.
- As a road mapping for other emerging countries, the Brazilian Gas Chair experience is a real Case Study of diversified initiatives to build up or expand the Gas Civilization.